

CALFEE CCC PHASE 2

HISTORIC RENOVATION

1 CORBIN-HARMON DRIVE
PULASKI, VIRGINIA 24301

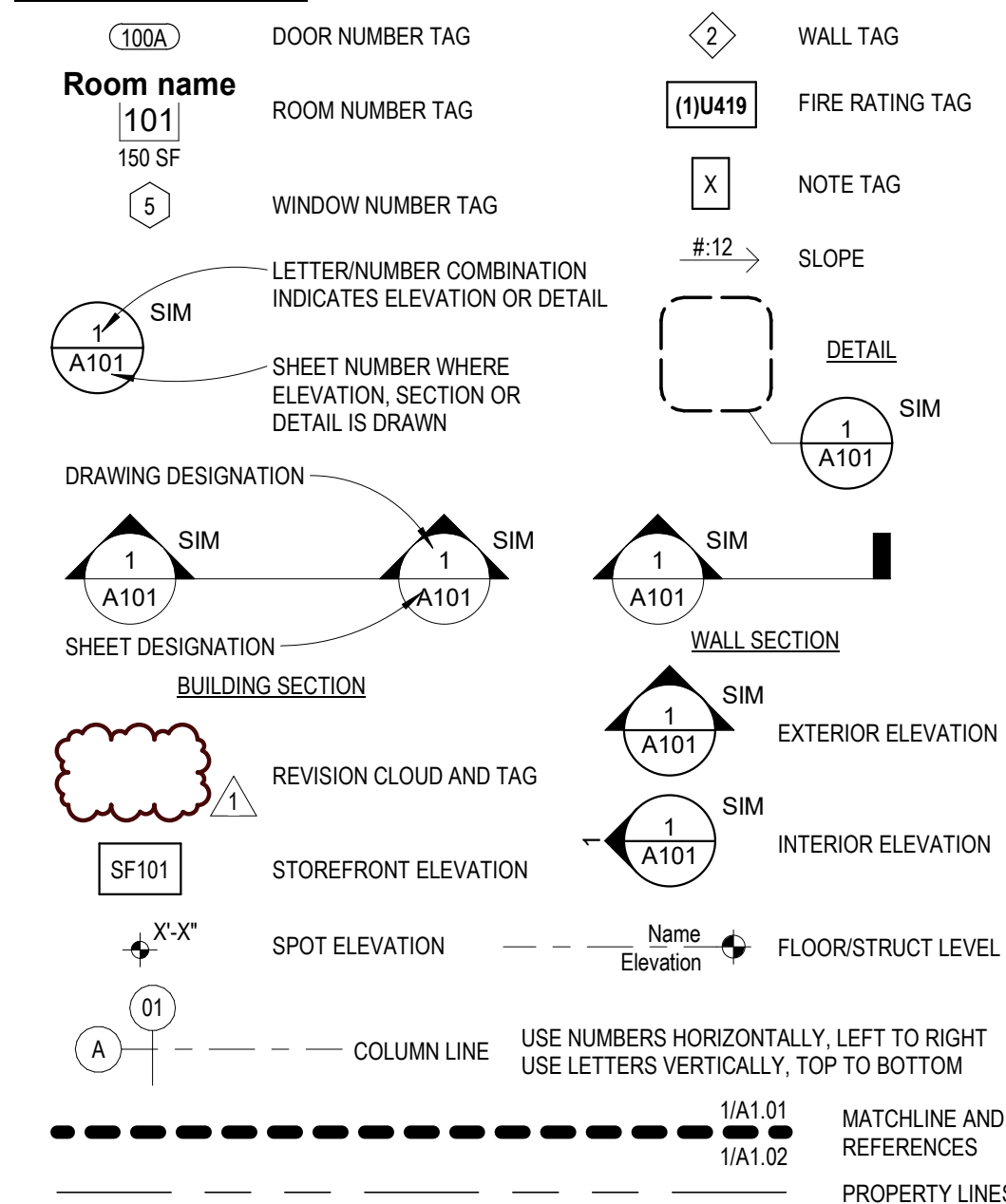
BALZER PROJECT NO. 23220008.00

ABBREVIATIONS

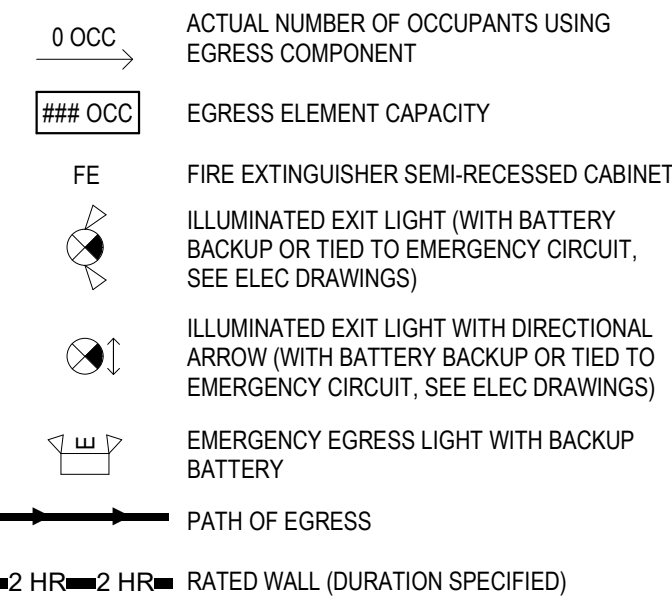
| | | | |
|--------|----------------------------------|--------------|-----------------------------|
| AFF | ABOVE FINISH FLOOR | LW | LIGHTWEIGHT |
| AP | ACCESS PANEL | LTL | LITTLE |
| ACT | ACoustic CEILING TILE | LL | LIVE LOAD |
| ACPL | ACoustic PLASTER | LVR | LOUVER |
| AC | AIR CONDITIONING | | |
| ALUM | ALUMINUM | MH | MAN HOLE |
| AB | ANCHOR BOLT | MFR | MANUFACTURER |
| AND | AND/OR | MAS | MASONRY |
| APPROX | APPROXIMATELY | MO | MASONRY OPENING |
| AD | AREA DRAIN | MATL | MATERIAL |
| ARCH | ARCHITECT (URAL) | MAX | MAXIMUM |
| ASPH | ASPHALT | MECH | MECHANICAL |
| | | MTL | METAL |
| BP | BASE PLATE | MTL BLDG MFR | METAL BUILDING MANUFACTURER |
| BSMT | BASMENT | MFD | METAL FLOOR DECKING |
| BM | BEAM | MRO | METAL ROOF DECKING |
| BRG | BEARING | MN | MASONRY |
| BFT | BELOW FINISHED FLOOR | MISC | MISCELLANEOUS |
| BLG | BLOCKING | MB | MOISTURE BARRIER |
| BD | BOARD | MELDG | MOLDING/MOULDING |
| BT | BOTTOM | MTG, MNTG | MOUNTING |
| BRK | BRICK | | |
| BRG | BRICK COURSES | NOM | NOMINAL |
| BLG | BUILDING | NC | NOT IN CONTRACT |
| | | NTS | NOT TO SCALE |
| | | NO. # | NUMBER |
| CPT | CARPET | | |
| CO | CASED OPENING | OC | ON CENTER |
| CSMT | CASING | OPG | OPENING |
| CLS | CEILING | OPP | OPPOSITE |
| CH | CEILING HEIGHT | OPH, OPFH | OPPOSITE HAND |
| CL | CENTER LINE | OPH | ORIENTED STRAND BOARD |
| CT | CERAMIC TILE | OD | OUTSIDE DIAMETER |
| CR | CHAIR RAIL | OF | OUTSIDE FACE |
| CLR | CLEARANCE | OA | OVERALL |
| CLS | CLOSET | | |
| COL | COLUMN | | |
| CONC | CONCRETE | | |
| CMU | CONCRETE MASONRY UNIT | PHL | PANEL |
| CONST | CONSTRUCTION | PVMT | PAVEMENT |
| CONT | CONTINUOUS | PTD | PAINTED |
| CJ | CONTROL JOINT | PTB | PARTICLE BOARD |
| CCR | CORRIDOR | PLST | PLASTER |
| CTR | COUNTER | PLM | PLASTIC LAMINATE |
| CNS | COURSE | PLT | PLATE |
| | | PLG | PLATE GLASS |
| DEM | DEMOLITION | PWD | POLYVINYL CHLORIDE |
| DEPT | DEPARTMENT | PVC | POLYVINYL CHLORIDE |
| DAG | DIAGONAL | PFE | PORTABLE FIRE EXTINGUISHER |
| DAM | DIAMETER | LB | POUND |
| DM | DIMENSION | PSF | POUNDS/SQUARE FOOT |
| DO | DITTO | PSI | POUNDS/SQUARE INCH |
| DIV | DIVISION | PC CONC | PRECAST CONCRETE |
| DOOR | DOOR | PRETN | PRETENSIONED |
| DH | DOUBLE HUNG | PL | PROPERTY LINE |
| DS | DOWN SPOUT | PROP | PROPOSED |
| D | DRAIN | | |
| DT | DRAIN TILE | QT | QUARRY TILE |
| DWG | DRAWING | | |
| | | | |
| ELEC | ELECTRIC | RAD | RADIUS |
| ENC | ELECTRIC WATER COOLER | R | RISER |
| EP | ELECTRICAL PANEL BOARD | REC | RECEPTACLE/ELECTRICAL |
| ELEV | ELEVATION | REF | REFRIGERATOR |
| EMER | EMERGENCY | REG | REGISTER |
| ENCL | ENCLOSURE | RENF | REINFORCED |
| ENG | ENGINEERING | REMO | REMOVE |
| ENT | ENTRANCE | REQ | REQUIRED |
| EQU | EQUAL | RES | RESILIENT |
| EQUIP | EQUIPMENT | RET | RETURN |
| EXH | EXHAUST | RA | RETURN AIR |
| CHST | EXISTING | REV | REVISION |
| EB | EXPANSION BOLT | RH | RIGHT HAND |
| EJ | EXPANSION JOINT | RIW | RIGHT OF WAY |
| EXT | EXTERIOR | RD | ROUGH OPENING |
| | | | |
| FB | FACE BRICK | SCH | SCHEDULE |
| FOB | FACE OF BRICK | SEC | SECTION |
| FT | FEET, FOOT | SECT | SECTION |
| FN | FENCE | SHT | SHEET |
| FN FL | FINISH FLOOR | SHT | SHEET |
| FEC | FIRE EXTINGUISHER CABINET | SM | SIMILAR |
| FHC | FIRE HOSE CABINET | SLDR | SLIDING DOOR |
| FPL | FIREPLACE | SC | SOLID CORE |
| FLR | FLOORING | SCW | SOLID CORE WOOD |
| FD | FLOOR DRAIN | SVP | SOUTHERN YELLOW PINE |
| FLOR | FLOOR | SPEC | SPECIFICATION |
| FTG | FOOTING | SPR | SPRINKLER |
| FOU | FOUNDATION | SF | SQUARE FEET |
| FRA | FRESH AIR | SRS | STAINLESS STEEL |
| FBO | FURNISHED BY OTHERS | STOR | STORAGE |
| | | STRUCT | STRUCTURAL |
| | | SUSP | SUSPENDED |
| | | SYS | SYSTEM |
| | | | |
| GAGE | GAGE, GAUGE | TELE | TELEPHONE |
| GALV | GALVANIZED | TV | TELEVISION |
| GC | GENERAL CONTRACTOR | THK | THICKNESS |
| GL | GLASS | THP | THIN COAT PLASTER |
| GLB | GLASS BLOCK | THRD | THROUGH |
| GD | GRADE, GRADING | TOL | TOLLE |
| GWB | GYP SUM WALL BOARD | T&G | TONGUE AND GROOVE |
| GYP BD | GYP SUM BOARD | TSL | TOP OF SLAB |
| | | TSS | TOP OF STEEL |
| HC | HANDICAP | TOW | TOP OF WALL |
| HDWR | HARDWARE | TYP | TYPICAL |
| HWD | HARDWOOD | | |
| HBR | HEATING | | |
| HTC | HEATING/VENTILATING/CONDITIONING | | |
| HVAC | HEATING/VENTILATING/CONDITIONING | | |
| HD | HIGH | | |
| HST | HOLLOW CORE | | |
| HC | HOLLOW METAL | | |
| HMT | HORIZONTAL | | |
| HORIZ | HOSE BIBB | | |
| HI | HOT WATER HEATER | | |
| HW | HOT WATER HEATER | | |
| | | | |
| INS | INSIDE DIAMETER | | |
| ID | INCLUDED (ING) | | |
| INSUL | INSULATION | | |
| INT | INTERIOR | | |
| | | | |
| JAN | JANITORS CLOSET | | |
| | | | |
| KIT | KITCHEN | | |
| KD | KNOCK DOWN | | |
| KD | KNOCKOUT | | |
| KD | KNOCKOUT | | |
| | | | |
| LABEL | LABEL | | |
| LBL | LAMINATE(D) | | |
| LAM | LAMINATE | | |
| LAV | LAVATORY | | |
| LH | LEFT HAND | | |
| LH | LENGTH, LONG | | |
| LG | LENGTH, LONG | | |

SYMBOLS & MATERIALS

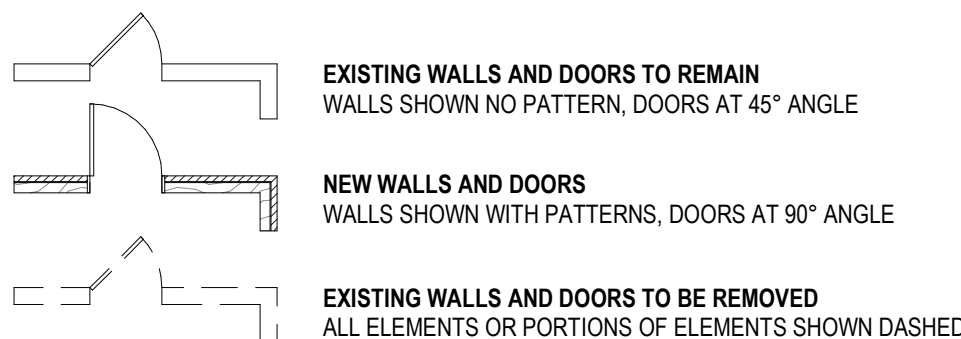
GRAPHIC STANDARDS



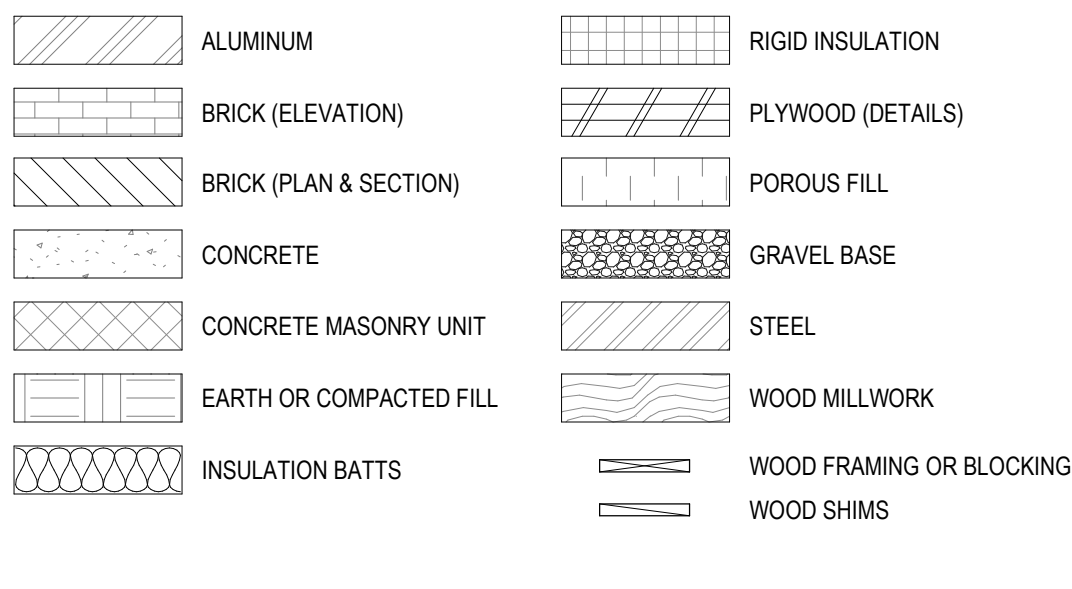
LIFE SAFETY LEGEND



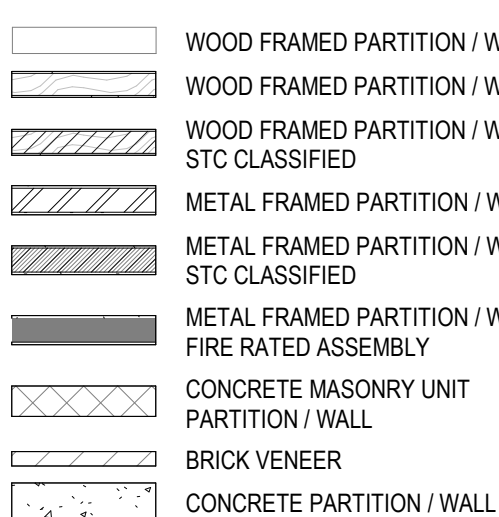
PHASE LEGEND



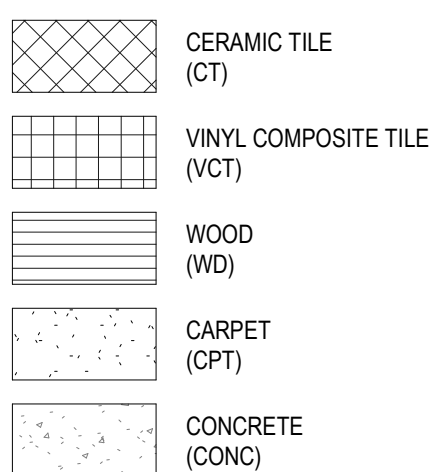
MATERIAL LEGEND



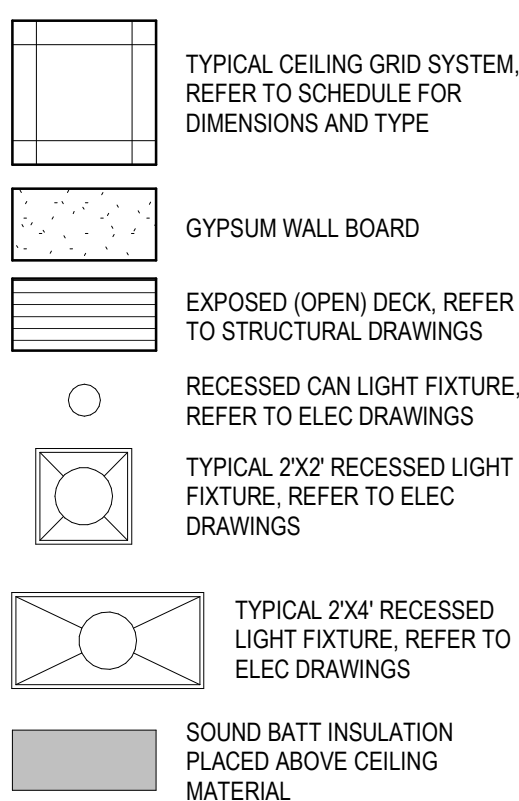
PARTITION / WALL LEGEND



FLOOR FINISH LEGEND



CEILING LEGEND



PROJECT DIRECTORY

OWNER

CCCC LLC
CONTACT: JILL WILLIAMS
ADDRESS: 1 CORBIN-HARMON DR.
PULASKI, VA 24301
PHONE: (540)509-0808
EMAIL: jill.e.williams@gmail.com

ARCHITECT

BALZER & ASSOCIATES, INC.
CONTACT: A. RYAN WATSON
ADDRESS: 80 COLLEGE ST, SUITE H
CHRISTIANSBURG, VA 24073
PHONE: (540)381-4290
EMAIL: rwatson@balzer.cc
WEBSITE: www.balzer.cc

CIVIL ENGINEER

BALZER & ASSOCIATES, INC.
CONTACT: JAMES TAYLOR
ADDRESS: 80 COLLEGE ST, SUITE H
CHRISTIANSBURG, VA 24073
PHONE: (540)381-4290
EMAIL: jtaylor@balzer.cc
WEBSITE: www.balzer.cc

STRUCTURAL ENGINEER

BALZER & ASSOCIATES, INC.
CONTACT: MIKE FITZGERALD
ADDRESS: 80 COLLEGE ST, SUITE H
CHRISTIANSBURG, VA 24073
PHONE: (540)381-4290
EMAIL: mfitzgerald@balzer.cc
WEBSITE: www.balzer.cc

MECHANICAL/PLUMBING ENGINEER

STOTTSBERG ENGINEERING
CONTACT: JOHN N. BERG, P.E.
ADDRESS: PO Box 876
Fincastle, Virginia 24090
PHONE: 540-216-0331
EMAIL: john@stottsbergeng.com

ELECTRICAL ENGINEER

GIBSON ENGINEERING, LLC
CONTACT: Daniel Gibson, P.E., LEED AP
ADDRESS: 2100 Lubna Drive
Christiansburg, VA 24073
PHONE: 540-998-6069
EMAIL: gibsonengineering@gmail.com



BALZER & ASSOCIATES
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS



CALFEE COMMUNITY & CULTURAL CENTER

PROJECT DESCRIPTION

APPROXIMATE DATE OF FEATURE 1939, 1951, MODERN

DESCRIBE EXISTING FEATURE AND ITS CONDITION:
CALFEE TRAINING SCHOOL IN THE TOWN OF PULASKI, VIRGINIA, WAS BUILT 1938-39 WITH FUNDING FROM THE PUBLIC WORKS ADMINISTRATION AS AN ELEMENTARY SCHOOL FOR BLACK STUDENTS DURING THE SEGREGATION ERA. THE SCHOOL WAS BUILT AS A ONE-STORY BRICK BUILDING WITH EIGHT CLASSROOMS AND AN AUDITORIUM. THE SCHOOL WAS ENLARGED IN 1951 WITH A SMALL ADDITION FOR THE KITCHEN AND CAFETERIA AT THE REAR NORTHWEST CORNER. THE ORIGINAL "T" SHAPED BUILDING CONSISTS OF A CENTRAL ENTRANCE PAVILION FLANKED BY PROJECTING END PAVILIONS AND A LINEAR REAR WING WITH TWO SEPARATE SECTIONS CONNECTED BY A SMALL HYPHEN. THE BUILDING IS FACED IN BRICK VENEER, LAID IN FLEMISH VARIANT BOND, AND FEATURES GABLE AND HIPPED ROOFS. ITS BALANCED FAÇADE REFLECTS THE COLONIAL REVIVAL STYLE, COMPRISING A CENTER PAVILION WITH A RECESSED ENTRANCE FEATURING A CLASSICAL PEDIMENT AND FLANKED BY LARGE BANKS OF DOUBLE-HUNG WINDOWS AND PROJECTING END PAVILIONS. THE INTERIOR DESIGN AND DETAILS ARE FUNCTIONAL AND DEMONSTRATE HOW THE BUILDING WAS ADAPTED OVER TIME TO MEET THE COMMUNITY'S CHANGING NEEDS. THE BUILDING FUNCTIONED AS AN ELEMENTARY SCHOOL FOR BLACK STUDENTS UNTIL 1966, WHEN PULASKI COUNTY PUBLIC SCHOOLS INTEGRATED. SINCE INTEGRATION, THE BUILDING HAS SERVED AS A DESEGREGATED KINDERGARTEN. THE PULASKI COUNTY CHILD DEVELOPMENT CENTER, AND AS CORPORATE OFFICES. IN 1980, THE BUILDING WAS RENOVATED AS OFFICES FOR THE MAGNOX CORPORATION. THE CALFEE TRAINING SCHOOL IS INDIVIDUALLY LISTED ON THE NATIONAL REGISTER OF HISTORIC PLACES WITH A PERIOD OF SIGNIFICANCE OF 1938 - 1966. THE 2.66-ACRE SITE INCLUDES A 1981 PUMP STATION AND A CA. 1990 METAL STORAGE BUILDING, BOTH OF WHICH ARE NON-CONTRIBUTING.

DESCRIBE WORK AND IMPACT ON EXISTING FEATURE:
RENOVATIONS WILL BE MADE TO THE SCHOOL AS PART OF THIS STATE-ONLY TAX CREDIT PROJECT TO RENOVATE THE BUILDING INTO A COMMUNITY AND CULTURAL CENTER THAT WILL HOUSE A CHILDCARE PROGRAM, MUSEUM COMMEMORATING LOCAL AFRICAN AMERICAN HISTORY, A COMMUNITY KITCHEN, EVENT AND OFFICE SPACES, A COMPUTER LAB, AND OUTDOOR PLAY SPACES.

DRAWING INDEX

| REVISIONS | | | | | | | SHEET NO. | SHEET TITLE |
|-----------|---|---|---|---|---|---|-----------|--|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| | | | | | | | T1.01 | COVER SHEET |
| | | | | | | | T1.02 | CODE SUMMARY AND GENERAL NOTES |
| | | | | | | | T2.01 | OUTLINE SPECIFICATIONS |
| | | | | | | | T2.02 | OUTLINE SPECIFICATIONS & PENETRATION DETAILS |
| | | | | | | | T3.01 | ACCESSIBILITY REFERENCE DETAILS |
| | | | | | | | T4.01 | LIFE SAFETY PLAN |
| | | | | | | | S0.01 | GENERAL STRUCTURAL NOTES |
| | | | | | | | S1.01 | FOUNDATION PLAN |
| | | | | | | | S1.02 | FRAMING PLAN |
| | | | | | | | S2.01 | STRUCTURAL DETAILS |
| | | | | | | | D1.01 | DEMOLITION FLOOR PLAN & NOTES |
| | | | | | | | D1.02 | EXISTING LOFT DEMOLITION PLAN |
| | | | | | | | D2.01 | DEMOLITION EXISTING ELEVATIONS |
| | | | | | | | D2.02 | DEMOLITION EXISTING ELEVATIONS |
| | | | | | | | A0.01 | CRAWL SPACE PLAN |
| | | | | | | | A1.01 | OVERALL FLOOR PLAN |
| | | | | | | | A1.04 | ENLARGED FLOOR PLAN - KITCHEN ADD. & FUTURE AUDITORIUM |
| | | | | | | | A1.05 | FUTURE AUDITORIUM CLERESTORY PLAN |
| | | | | | | | A1.06 | KITCHEN EQUIPMENT PLAN |
| | | | | | | | A1.11 | REFLECTED CEILING PLAN |
| | | | | | | | A1.21 | ROOF PLAN |
| | | | | | | | A1.31 | FINISH & PARTITION SCHEDULES |
| | | | | | | | A1.32 | DOOR SCHEDULES |
| | | | | | | | A1.33 | STOREFRONT ELEVATIONS AND WINDOW TYPES |
| | | | | | | | A2.01 | EXTERIOR ELEVATIONS |
| | | | | | | | A2.02 | EXTERIOR ELEVATIONS |
| | | | | | | | A3.01 | BUILDING SECTIONS |
| | | | | | | | A3.12 | WALL SECTIONS |
| | | | | | | | A4.01 | DETAILS |
| | | | | | | | M101 | MECHANICAL LEGEND AND NOTES |
| | | | | | | | M102 | MECHANICAL SCHEDULES AND DETAILS |
| | | | | | | | M103 | MECHANICAL SPECIFICATIONS |
| | | | | | | | M200 | MECHANICAL NEW WORK PLAN - FIRST FLOOR |
| | | | | | | | M201 | MECHANICAL NEW WORK PLAN - ROOFTOP |
| | | | | | | | P101 | PLUMBING GENERAL NOTES & LEGENDS |
| | | | | | | | P102 | PLUMBING DETAILS |
| | | | | | | | P103 | PLUMBING SPECIFICATIONS |
| | | | | | | | P200 | FIRST FLOOR PLUMBING - WATER & GAS |
| | | | | | | | P300 | FIRST FLOOR PLUMBING - WASTE & VENT |
| | | | | | | | E101 | ELECTRICAL LEGEND AND GENERAL NOTES |
| | | | | | | | E201 | ELECTRICAL OVERALL FLOOR PLAN |
| | | | | | | | E202 | ELECTRICAL FLOOR PLANS, ONE LINE DIAGRAM AND PANEL SCHEDULES |
| | | | | | | | E301 | ELECTRICAL SPECIFICATIONS |
| | | | | | | | E302 | ELECTRICAL SPECIFICATIONS |



BALZER & ASSOCIATES
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

Roanoke / Richmond
New River Valley
Shenandoah Valley

www.balzer.cc

80 College Street, Suite H

Christiansburg, VA 24073

540.381.4290



CALFEE CCC PHASE 2

HISTORIC RENOVATION

COVER SHEET

DRAWN BY: ARW/LMC/STC
DESIGNED BY: ARW
CHECKED BY: ARW
DATE: 04/22/2025
SCALE: As indicated
REVISIONS:

T1.01

PROJECT NO.

23220008.00

MEANS AND METHODS

- BALZER AND ASSOCIATES AND THEIR PROFESSIONAL CONSULTANTS WILL NOT HAVE CONTROL OF AND WILL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, SEQUENCES, OR FOR SAFETY PRECAUTIONS IN CONNECTION WITH THE WORK ON THIS PROJECT OR FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK ON THIS SITE.

CONTRACTOR COORDINATION

- ALL WORK SHALL BE COORDINATED WITH OTHER TRADES IN ORDER TO AVOID INTERFERENCE AND PRESERVE MAXIMUM HEADROOM AND AVOID OMISSIONS.
- SUBCONTRACTORS, BEFORE STARTING THEIR WORK SHALL CHECK AND VERIFY THEIR PARTICULAR RELATED REQUIREMENTS FOR COMPLIANCE ALONG WITH MEASUREMENTS, SURFACE LEVELS, AND SURFACE CONDITIONS NEAR AND ABOUT THEIR WORK. IT WILL BE CONCLUDED THAT EACH BIDDER UNDERSTANDS AND KNOWS EXACTLY WHAT WILL BE REQUIRED. COMMENCEMENT OF WORK SIGNIFIES ACCEPTANCE OF EXISTING CONDITIONS AS SATISFACTORY.
- LAYOUT ALL PARTITIONS BEFORE BEGINNING CONSTRUCTION TO PREVENT ERRORS BY DISCREPANCY. ALL PARTITIONS WILL BE INSTALLED AS NOTED ON THE DRAWINGS. DO NOT SCALE THE DRAWINGS.
- EACH CONTRACTOR IS RESPONSIBLE FOR FIRST CLASS WORKMANSHIP AND WILL ASSUME ALL RESPONSIBILITY FOR THE CARE AND PROTECTION OF THEIR OWN WORK AND MATERIALS FROM DAMAGE. THEY WILL MAKE GOOD ANY DAMAGE TO THEIR OWN OR OTHER WORK CAUSED BY THEMSELVES OR WORKMEN EMPLOYED BY THEM.

INSURANCE

- GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL PROVIDE A CERTIFICATE OF INSURANCE TO THE OWNER PRIOR TO STARTING ANY WORK ON THIS PROJECT. CERTIFICATE OF INSURANCE CANNOT BE TERMINATED OR CANCELED WITHOUT TEN (10) DAYS PRIOR WRITTEN NOTICE TO THE OWNER AND SATISFACTORY REPLACEMENT IS IN PLACE.

AVAILABLE INFORMATION

- CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DRAWING DIMENSIONS PRIOR TO COMMENCING ANY WORK. ANY INCONSISTENCIES SHALL BE REPORTED TO THE ARCHITECT IN WRITING PRIOR TO COMMENCING WORK. FAILURE TO REPORT INCONSISTENCIES WILL RELIEVE ARCHITECT AND OWNER FROM ANY CLAIM FOR ADDITIONAL WORK REQUIRED RELATED TO THE INCONSISTENCY.
- UNDER NO CIRCUMSTANCES SHALL THESE DRAWINGS BE USED FOR SHOP DRAWINGS.
- WORK NOTED AS "N.C." IS NOT PART OF THIS CONTRACT, AND WILL BE HANDLED BY OWNER UNDER SEPARATE CONTRACT.
- WORK NOT INDICATED ON A PART OF THE DRAWINGS, BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PIECES, SHALL BE REPEATED.
- IN CASE OF CONFLICT BETWEEN THE GENERAL NOTES, SPECIFICATIONS, AND DRAWINGS, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN UNLESS ARCHITECT INSTRUCTS OTHERWISE.
- NOT ALL DETAILS, EQUIPMENT, SYSTEMS OR MATERIALS SECTIONS ARE INCLUDED IN THE DOCUMENTS. THE CONTRACTOR SHALL BASE THEIR BID ON THE SUPPLIED INFORMATION, AND SHALL ALSO INCLUDE ANY ADDITIONAL DETAILS, EQUIPMENT, SYSTEMS OR MATERIAL REQUIRED TO DELIVER A COMPLETE AND FINISHED PRODUCT TO THE OWNER THAT ARE REASONABLY AND NORMALLY INCLUDED IN A COMPLETED PROJECT OF SIMILAR SCOPE, IN COMPLIANCE WITH ALL LAWS, CODES AND ORDINANCES.
- DO NOT SCALE THE DRAWINGS. RELY ON WRITTEN DIMENSIONS AS GIVEN.
- ALL INTERIOR DIMENSIONS SHOWN ON THE PLANS ARE FROM FACE OF STUD OF NEW CONSTRUCTION AND FINISH FACE OF EXISTING CONSTRUCTION UNLESS OTHERWISE NOTED. EXTERIOR WALL DIMENSIONS ARE FROM INTERIOR FACE OF STUD TO EXTERIOR FACE OF SHEATHING OF NEW CONSTRUCTION AND FROM INTERIOR FINISHED FACE TO EXTERIOR FINISHED FACE OF EXISTING CONSTRUCTION. DIMENSIONS SHOWN ON FLOOR PLANS, SECTIONS, ELEVATIONS AND DETAILS ARE TO FACE OF STUD, MASONRY, OR CONCRETE GRIDLINES, UNLESS OTHERWISE NOTED.
- ALL DIMENSIONS SHOWN ON THE PLANS TO ACCESSIBILITY RELEVANT BUILDING FEATURES/FIXTURES ARE FROM FACE OF FINISH MATERIAL, (BOTH FLOORS AND WALLS). MAKE SPECIAL NOTE OF DIMENSIONS INDICATED AS "CLEAR" OR "ABOVE FINISHED FLOOR".
- GENERAL CONTRACTOR SHALL OBTAIN AND MAINTAIN ACCESS ON SITE TO COPIES OF ALL RELEVANT CODE REFERENCES. EDITIONS SHALL BE PER THE CURRENT VERSION OF THE VIRGINIA CONSTRUCTION CODE (INDICATED IN THE CODE SUMMARY) AND REFERENCED STANDARDS PER THE VIRGINIA CONSTRUCTION CODE.

SUMMARY

- ACCESS PANELS SHALL BE PROVIDED AND INSTALLED WHEREVER REQUIRED BY BUILDING CODE OR FOR THE PROPER OPERATION OR MAINTENANCE OF PLUMBING, MECHANICAL OR ELECTRICAL EQUIPMENT, WHETHER OR NOT INDICATED ON THE DRAWINGS. COORDINATE SIZE, LOCATION, FIRE RATING, AND TYPE OF ACCESS PANEL WITH OTHER WORK.
- WHEN IT IS NECESSARY TO INTERRUPT ANY EXISTING UTILITY SERVICE TO MAKE CORRECTIONS AND/OR CONNECTION, A MINIMUM OF 48 HOURS OR TWO (2) WORKING DAYS ADVANCE NOTICE SHALL BE GIVEN TO THE OWNER. INTERRUPTIONS IN UTILITY SERVICES SHALL BE OF THE SHORTEST POSSIBLE DURATION FOR THE WORK AT HAND AND SHALL BE APPROVED IN ADVANCE BY THE OWNER. IF REQUIRED BY OWNER, WORK SHALL BE PERFORMED AFTER NORMAL BUSINESS HOURS.
- THE GENERAL CONTRACTOR SHALL PROTECT ALL EXISTING OR NEWLY INSTALLED FINISH WORK AND SURFACES FROM DAMAGE DURING THE COURSE OF CONSTRUCTION AND SHALL REPLACE AND/OR REPAIR ALL DAMAGED SURFACES CAUSED BY CONTRACTOR OR SUBCONTRACTOR PERSONNEL TO THE SATISFACTION OF THE OWNER.
- ALL GENERAL CONTRACTOR AND SUB-CONTRACTORS PERFORMING WORK ON THE PREMISES SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING A REASONABLE AND PRUDENT SAFETY PROGRAM INCLUDING BUT NOT LIMITED TO THE ISOLATION OF WORK AREAS AND THE PROMPT REMOVAL OF ANY DEBRIS OR TOOLS WHICH MIGHT ENDANGER SITE VISITORS AND STAFF OF THE OWNER.
- GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL STIFFENERS, BRACINGS, BACK-UP PLATES, BLOCKING, AND SUPPORTING BRACKETS REQUIRED FOR THE INSTALLATION OF ALL CASEWORK, TOILET ACCESSORIES AND OF ALL FLOOR-MOUNTED OR SUSPENDED MECHANICAL AND ELECTRICAL EQUIPMENT.
- ALL PIPES, DUCTS AND BUS DUCTS, WHICH PENETRATE THE WALLS, CEILINGS, OR FLOOR CONSTRUCTION, SHALL BE INSTALLED SO AS TO MAINTAIN THE FIRE RESISTIVE RATING AND STRUCTURAL INTEGRITY OF THE ASSEMBLY.
- ALL WALLS SHALL BE ADEQUATELY BRACED TO RESIST ALL HORIZONTAL LOADS FROM WIND, EARTH, AND CONSTRUCTION LOADS DURING INSTALLATION AND UNTIL SUCH TIME AS PERMANENT ANCHORAGE IS IN PLACE. HEAVY COMPACTION EQUIPMENT WILL NOT BE ALLOWED WITHIN A DISTANCE SUBTENDED BY A 45 DEGREE ANGLE BETWEEN THE SURFACE OF THE GROUND AND ANY FOOTING.

TEMPORARY FACILITIES AND CONTROLS

- PROVIDE A SECURE STAGING AND MATERIAL STORAGE AREA ADJACENT TO THE AREA OF CONSTRUCTION. LOCATION SHALL BE COORDINATED WITH THE OWNER'S REQUIREMENTS.
- PROVIDE TEMPORARY BARRICADES TO SEPARATE CONSTRUCTION AREAS FOR PUBLIC SAFETY AROUND ENTIRE PERIMETER OF CONSTRUCTION AREA.
- PROVIDE PERIODIC INSPECTION OF TEMPORARY BARRIERS, BARRICADES, ENCLOSURES, AND TEMPORARY FENCING TO ENSURE THEIR CONTINUITY AND INTEGRITY.

EXECUTION AND CLOSEOUT REQUIREMENTS

- FINAL CLEAN UP AND DISPOSAL: REMOVE DEBRIS, RUBBISH AND WASTE MATERIAL FROM THE PROPERTY TO A LAWFUL DISPOSAL AREA AND PAY ALL HAULING AND DUMPING COSTS. CONFORM TO ALL PERTAINING FEDERAL, STATE AND LOCAL LAWS, REGULATIONS AND ORDERS UPON COMPLETION OF WORK. ALL CONSTRUCTION AREAS SHALL BE LEFT VACUUM-CLEAN AND FREE FROM DEBRIS. CLEAN ALL DUST, DIRT, STAIN, HAND MARKS, PAINT SPOTS, DROPPINGS, AND OTHER BLEMISHES. AFTER ALL OTHER WORK IS COMPLETED AND JUST PRIOR TO TURNING THE SPACE OVER TO THE OWNER, THE CONSTRUCTION MANAGER WILL EMPLOY THE SERVICES OF A PROFESSIONAL CLEANING SERVICES TO CLEAN AND WASH DOWN ALL INSTALLED EQUIPMENT, SERVICE AREAS, ALONG WITH THE CLEANING OF ALL GLASS WINDOW/DOOR SURFACES PRIOR TO OCCUPANCY.
- AT PROJECT COMPLETION GENERAL CONTRACTOR SHALL PROVIDE ONE (1) COMPLETE SET OF AS-BUILT DRAWINGS INDICATING ALL DISCREPANCIES, CHANGES, VARIANCE AND/OR DEVIATION FROM THE CONSTRUCTION DOCUMENTS, AND ACTUAL LOCATIONS OF CONCEALED WORK, AND FULL COLLECTION OF WARRANTIES AND OPERATIONS INSTRUCTIONS PRIOR TO FINAL PAYMENT.
- AS PART OF FINAL CLEAN-UP, PRIOR TO TURN-OVER, REPLACE ALL MECHANICAL SYSTEM FILTERS WITH NEW FILTERS (BUT BEFORE FINAL AIR BALANCE TESTING).

DIVISION 01 - GENERAL REQUIREMENTS

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR SAFETY PRECAUTIONS AND PROGRAMS AS THEY RELATE TO THE WORK OF THIS PROJECT.

DIVISION 01 - APPLICABLE CODES

- ALL CONSTRUCTION MUST COMPLY WITH ALL GOVERNING CODES.
- CONTRACTOR WILL ABIDE BY LOCAL AREA STANDARDS AND RELATED OSHA STANDARDS FOR THE SAFETY OF THEIR EMPLOYEES ON SITE. BALZER AND ASSOCIATES AND THEIR PROFESSIONAL CONSULTANTS WILL BE HELD HARMLESS BY THE OWNER, GC AND RELATED AWARDED TRADES, ON THIS PROJECT FOR ACCIDENTS OR INJURIES CAUSED BY OR ACCRUED ON THIS PROPERTY DURING THE CONSTRUCTION OF THIS PROJECT.
- ALL DESIGNS, CONSTRUCTION, MATERIALS, AND WORKMANSHIP SHALL COMPLY WITH THE GOVERNING BUILDING CODE(S), AS A MINIMUM LEVEL OF CONSTRUCTION DETAIL AND QUALITY. ALL WORK INCLUDED IN THE CONSTRUCTION OF THIS PROJECT SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF THE CODE(S). BY COMMENCING CONSTRUCTION, CONTRACTOR ACKNOWLEDGES UNDERSTANDING OF THE CODE(S) AND AGREES TO INCORPORATE ALL REQUIRED ELEMENTS, WHETHER INDICATED WITHIN THE DOCUMENTS OR NOT.
- ALL AREAS SHALL BE ACCESSIBLE TO THE HANDICAPPED, IN ACCORDANCE WITH GOVERNING CODES AND ACCESSIBILITY GUIDELINES.

DIVISION 01 - TEMPORARY WORK

- CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, ENGINEERING, PERMITTING AND ERECTION OF ALL TEMPORARY SCAFFOLDING, HOISTS, BRACING, FORM WORK, SHEETING, SHORING AND UNDERPINNING NECESSARY TO PERFORM THE WORK.
- TEMPORARY BRACING, SHEETING, SHORING, AND SIMILAR TEMPORARY WORK, INCLUDING CONSTRUCTION, CONTRACTOR ACKNOWLEDGES UNDERSTANDING OF THE CODE(S) AND AGREES TO INCORPORATE ALL REQUIRED ELEMENTS DURING CONSTRUCTION SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE COMMONWEALTH OF VIRGINIA.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY TEMPORARY UTILITIES AND TEMPORARY SERVICES SHALL BE INCLUDED IN THE CONTRACT. PROVIDE ANY NECESSARY TEMPORARY CONSTRUCTION REQUIRED TO MAINTAIN OWNER/TENANT/PATRON USE OF THE EXISTING PROPERTY OUTSIDE OF THE LIMITS OF CONSTRUCTION.

DIVISION 01 - SHOP DRAWINGS AND SUBMITTALS

- SHOP DRAWINGS FOR MATERIALS SHALL BE SUBMITTED TO THE ENGINEER/ARCHITECT AND/OR OWNER FOR REVIEW PRIOR TO THE START OF FABRICATION OR COMMENCEMENT OF WORK.
- A LIST OF PROPOSED SHOP DRAWING SUBMITTALS WITH A SCHEDULE OF REQUIRED APPROVAL DATES SHALL BE SUBMITTED TO THE ARCHITECT WITHIN TEN (10) DAYS OF ISSUANCE OF CONTRACT. BALZER AND ASSOCIATES SHALL HAVE A MINIMUM OF TEN (10) WORKING DAYS TO REVIEW ALL SHOP DRAWINGS AND RESUBMITTALS.
- GENERAL CONTRACTOR SHALL PROVIDE THREE (3) PRINTED COPIES OF SUBMITTALS AND SHOP DRAWINGS OR A DIGITAL COPY. DIGITAL COPIES ARE PREFERRED.
- NO PORTION OF THE CONTRACT DRAWINGS MAY BE REPRODUCED FOR SUBMITTAL AS SHOP DRAWINGS UNLESS AUTHORIZED BY BALZER AND ASSOCIATES, INC. IN WRITING.
- SHOP DRAWINGS SHALL BEAR THE GENERAL CONTRACTOR'S STAMP OF APPROVAL, WHICH SHALL CONSTITUTE CERTIFICATION THAT THEY HAVE VERIFIED ALL FIELD MEASUREMENTS, CONSTRUCTION CRITERIA, MATERIALS, AND SIMILAR DATA AND HAVE CHECKED EACH DRAWING FOR COMPLETENESS, COORDINATION, AND COMPLIANCE WITH THE CONTRACT DOCUMENTS. UNSTAMPED SUBMITTALS WILL BE REJECTED WITHOUT REVIEW.
- CHANGES TO SHOP DRAWINGS THAT ARE RE-SUBMITTED MUST BE CLOUDED OR OTHERWISE CLEARLY INDICATE THE CHANGES THAT HAVE BEEN MADE TO A PREVIOUSLY ISSUED AND REVIEWED DRAWING.
- WHERE SHOP DRAWINGS ARE REQUIRED, ARCHITECT/ENGINEER SHALL NOT BE LIABLE FOR WORK PERFORMED WITHOUT SHOP DRAWINGS APPROVED BY THEIR OFFICE.

DIVISION 01 - SUBSTITUTIONS

- SUBSTITUTIONS FOR SPECIFIED MATERIALS AND PRODUCTS SHALL BE MADE ONLY WITH PRIOR APPROVAL FROM THE OWNER AND/OR ARCHITECT.
- SUBSTITUTION REQUESTS SHALL BE MADE IN WRITING A MINIMUM OF 30 DAYS BEFORE MATERIAL IS TO BE INSTALLED. REQUEST WILL PROVIDE DOCUMENTATION THAT SUBSTITUTED PRODUCT COMPLIES WITH ALL SPECIFIED PROPERTIES AND PERFORMANCE OF ORIGINAL COMPONENT OR MATERIAL.
- ANY COST SAVINGS WILL BE RETURNED TO THE OWNER.
- NO INCREASE TO COST WILL BE ALLOWED.

DIVISION 01 - DESIGN BUILD

- PORTIONS OF THIS PROJECT ARE DESIGNED AS A DESIGN - BUILD PROJECT. AS SUCH, NOT ALL DETAILS, EQUIPMENT, SYSTEMS OR MATERIAL SELECTIONS ARE INCLUDED IN THE DOCUMENTS. CONTRACTOR SHALL BASE HIS BID ON THE SUPPLIED INFORMATION, AND SHALL ALSO INCLUDE ANY ADDITIONAL DETAILS, EQUIPMENT, SYSTEMS OR MATERIALS REQUIRED TO DELIVER A COMPLETE AND FINISHED PRODUCT TO THE OWNER, AS REASONABLY AND NORMALLY INCLUDED IN A COMPLETED PROJECT OF SIMILAR SCOPE, IN COMPLIANCE WITH ALL LAWS, CODES AND ORDINANCES.

DIVISION 02 - EXISTING CONDITIONS

- REFER TO THE DEMOLITION PLANS AND GENERAL NOTES FOR ADDITIONAL NOTES.

DIVISION 03 - CONCRETE (SEE STRUCTURAL NOTES FOR ADDITIONAL INFORMATION)

- INTERIOR SLABS SHALL HAVE VAPOR BARRIER TO BE ASTM E 1745, CLASS A, NOT LESS THAN 15 MILS THICK. VAPOR BARRIER SHALL BE CONTINUOUS FROM OUTSIDE FACE OF EXTERIOR WALLS. ALL PENETRATIONS AND SEAMS SHALL BE SEALED WITH MEMBRANE MANUFACTURER APPROVED TAPE AND/OR SEALANT. CONTRACTOR SHALL INSPECT WITH SPECIAL INSPECTOR (AS REQUIRED) IMMEDIATELY BEFORE CONCRETE PLACEMENT TO ENSURE INTEGRITY OF MEMBRANE.
- FLOOR SLABS TO BE DEPRESSED WHEN NECESSARY TO ACCOMMODATE FINISHED FLOOR SYSTEM WITH NO CHANGE IN FINISHED FLOOR ELEVATION TO ADJACENT FLOOR SYSTEMS. FLOOR MATERIALS MAY INCLUDE RECESSED FLOOR MATS, TILE, CARPET, OR SIMILAR FINISHES.

DIVISION 04 - MASONRY

(SEE STRUCTURAL NOTES FOR ADDITIONAL INFORMATION)

- ALL CONCRETE MASONRY WORK SHALL BE IN ACCORDANCE WITH ACI 530-02 "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES".
- BUILD ALL MASONRY LEVEL, SQUARE, PLUMB AND TRUE, USING BATTS FOR CLOSURES ONLY. MAINTAIN MINIMUM 1" CLEARANCE BETWEEN FACE OF SHEATHING/INSULATION AND BACK OF VENEER BRICK. VENEER MASONRY SHALL EXTEND TYPICALLY A MINIMUM OF 6" BELOW FINISHED GRADE.
- PROVIDE MORTAR NET, MANUFACTURED BY WIRE-BOND, ABOVE ALL FLASHING POINTS. INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
- MORTAR CROSS CELLS TO CONTAIN GROUT IN REINFORCED CELLS ONLY. NO SPILLAGE OF GROUT INTO NON-REINFORCED CELLS ALLOWED. ALL JOINTS AND MASONRY WALLS THAT CHANGE IN THICKNESS OR NUMBER OF CYTTES SHALL HAVE A COURSE OF SOLID OR GROUT FILLED UNITS AT THE TRANSITION.
- FLASHING AND WEEPS: WALL FLASHING SHALL BE "PERM-A-BARRIER" FLEXIBLE FLASHING BY W.R. GRACE, OR EQUAL, 60MIL SELF-ADHESIVE RUBBERIZED ASPHALT SHEET LAMINATED TO A CROSS LAMINATED POLYETHYLENE FILM AND 1X2X HEIMMED STEEL STRESS STEEL BRIDGING CONSTRUCTION 3/8" BEYOND FACE OF WALL. INSTALL FLASHING ABOVE ALL WINDOW AND DOOR HEADS, BELOW SILLS, AT FLOOR SLAB, AT INTERSECTIONS OF ROOFING AND VERTICAL WALLS AND AT OTHER INTERRUPTIONS TO DOWNWARD FLOW OF MOISTURE. TURN UP AND SEAL ENDS OF FLASHING TO PREVENT HORIZONTAL MIGRATION OF MOISTURE. PROVIDE OPEN HEAD WEEPS 24" ON CENTER AT ALL FLASHING POINTS. TOP OF FLASHING SHALL TERMINATE BEHIND WALL MOISTURE BARRIER.

DIVISION 04 - MASONRY TYPES AND SELECTIONS

- GENERAL CONTRACTOR SHALL BUILD A SAMPLE PANEL OF BRICK VENEER, SHOWING FULL RANGE OF BRICK FINISHES, INCLUDING ALL COLORS, TEXTURES AND MORTAR COLORS AND FLASHING MATERIALS, FOR APPROVAL BY OWNER AND/OR ARCHITECT PRIOR TO CONSTRUCTION.
- BRICK VENEER SHALL BE GENERAL SHAPE (BASIS OF DESIGN) STANDARD SIZE (3" VERTICAL COURSES = 8"). GRADE SW. TYPE FBX COMPLYING WITH ASTM C-216. STYLE SHALL BE COMPLIMENTARY TO EXISTING BRICK. COLOR TO BE SELECTED BY OWNER. REFER TO EXTERIOR MATERIALS SCHEDULE FOR ADDITIONAL NOTES.
- BRICK VENEER BID ALLOWANCE SHALL BE \$700 PER 1000 SQUARE FEET.
- MORTAR SHALL BE ASTM C270, TYPE M BELOW GRADE AND TYPE N ABOVE GRADE. COMPLY WITH MANUFACTURER MIXING AND APPLICATION SPECIFICATIONS.
- MORTAR SHALL BE FILL ALL JOINTS COMPLETELY WITH MORTAR AND FINISH JOINTS WITH A STEEL TOOLED "CONCAVE" JOINT. COLOR TO BE SELECTED BY OWNER.

DIVISION 04 - REPAIR OF EXISTING MASONRY

- REPOINTING MORTAR SHALL BE PREPARED AND PLACED IN ACCORDANCE WITH THE DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE CULTURAL RESOURCES PRESERVATION BRIEF 2, "REPOINTING MORTAR JOINTS IN HISTORIC MASONRY BUILDINGS", REVISED EDITION OCTOBER 1998, AND IN COMPLIANCE WITH THE GUIDELINES SET FORTH BY THE SECRETARY OF INTERIOR'S STANDARDS FOR REHABILITATION.
- THE REPOINTING OF MORTAR SHALL MATCH THE ORIGINAL IN COLOR, GRAIN SIZE, AND TEXTURE. THE COMPRESSIVE STRENGTH OF THE REPOINTING MORTAR SHALL BE EQUAL OR LESS THAN THE COMPRESSIVE STRENGTH OF THE ORIGINAL MORTAR AND SURROUNDING BRICK OR STONE. THE REPLACEMENT MORTAR SHALL CONTAIN APPROXIMATELY THE SAME INGREDIENT PROPORTIONS OF THE ORIGINAL MORTAR.
- ALL REPLACEMENT MORTAR INGREDIENTS AND MORTAR FORMULATIONS WILL BE ESTABLISHED FROM TEST DATA GATHERED FROM THE ORIGINAL MATERIALS SAMPLED FROM THE SITE AND ANALYZED BY A LABORATORY SPECIALIZING IN HISTORIC MORTAR ANALYSIS.
- MASONRY CLEANERS SHALL BE IN ACCORDANCE WITH THE DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE CULTURAL RESOURCES PRESERVATION BRIEF 1, "THE CLEANING AND WATERPROOF COATING OF MASONRY BUILDINGS", AND PRESERVATION BRIEF 6, "DANGERS OF ABRASIVE CLEANING TO HISTORIC BUILDINGS" IN COMPLIANCE WITH GUIDELINES SET FORTH BY THE SECRETARY OF THE INTERIOR'S STANDARDS FOR REHABILITATION.
- ALL CLEANING TECHNIQUES SHOULD USE THE GENTLEST MEANS POSSIBLE TO AVOID ETCHING, STAINING, BLEACHING, OR MASONRY DAMAGE. SAND BLASTING IS NOT PERMITTED.
- REPOINTING: LEAVE ONE INTACT AND SERVICEABLE EXAMPLE OF ORIGINAL MORTAR ON THE BUILDING. ALL JOINTS (UNLESS OTHERWISE NOTED) SHALL BE RAKED BACK TO SOUND, SOLID, BACKUP MATERIAL. ALL RAKING OUT SHOULD LEAVE A CLEAN, SQUARE FACE AT THE BACK OF THE JOINT TO PROVIDE FOR MAXIMUM CONTACT OF POINTING MORTAR WITH THE MASONRY BACKUP MORTAR. SHALLOW OR FEATHER EDGING SHALL NOT BE PERMITTED. EXISTING MORTAR JOINTS SHALL BE RAKED OUT A MINIMUM DEPTH OF 2.5 TIMES THE HEIGHT OF THE EXISTING MORTAR JOINTS. HOWEVER, SO AS NOT TO COMPROMISE THE STRUCTURAL STABILITY OF THE WALL, THE JOINT SHOULD NOT BE RAKED OUT MORE THAN HALF THE WIDTH OF THE MASONRY UNIT.
- USE HAND TOOLS AND POWER TOOLS ONLY AFTER TEST CUTS DETERMINE NO DAMAGE TO MASONRY UNITS RESULTS. VERTICAL (HEAD) JOINTS SHALL NOT BE RAKED OUT USING ROTARY POWER SAWS. DO NOT DAMAGE MASONRY UNITS. EXISTING HORIZONTAL (BED) JOINTS FILLED WITH HARD PORTLAND MORTAR MAY BE RAKED OUT USING A DIAMOND BLADE THAT IS NARROWER THAN THE JOINT WIDTH. THE REMAINING MORTAR SHALL BE REMOVED FROM THE JOINTS BY HAND USING MASONRY CHISELS OR PNEUMATIC CARVING TOOLS.
- EXISTING HISTORIC MORTAR SHALL BE REMOVED USING ONLY CHISELS THAT ARE NO WIDER THAN HALF THE WIDTH OF THE EXISTING MASONRY JOINTS. CONTRACTOR SHALL NOT WIDEN THE EXISTING MASONRY JOINTS. THE SURROUNDING MASONRY EDGES SHALL NOT BE SPALLED OR CHIPPED DURING MORTAR REMOVAL. CONTRACTOR SHALL REPLACE ALL BRICK DAMAGED DURING MORTAR REMOVAL WITH REPLACEMENT UNITS THAT MATCH THE ORIGINAL EXACTLY.

DIVISION 05 - STEEL (SEE STRUCTURAL NOTES FOR ADDITIONAL INFORMATION)

- ALL METAL RAILINGS SHALL BE FREE FROM DEFECTS IMPAIRING STRENGTH, DURABILITY OR APPEARANCE. MATERIALS SHALL BE MADE WITH STRUCTURAL PROPERTY TO SUSTAIN SAFETY OF WITHSTAND STRAIN AND STRESSES TO WHICH NORMALLY SUBJECTED. ALL EXPOSED FASTENINGS TO BE OF SAME MATERIALS. COLOR AND FINISH AS METAL TO WHICH APPLIED UNLESS OTHERWISE NOTED, AS FAR AS POSSIBLE. ALL WORK SHALL BE FITTED AND SHOP ASSEMBLED READY FOR ERECTION.
- EXTERIOR EXISTING RAILINGS SHALL BE REFINISHED/PAINTED BLACK AND NEW RAILINGS SHALL BE PREFINISHED FACTORY PRIMED & PAINTED BLACK.

DIVISION 06 - WOOD, PLASTICS, AND COMPOSITES (SEE STRUCTURAL NOTES FOR ADDITIONAL INFORMATION)

- WOOD CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION AND THE NATIONAL FOREST PRODUCTS ASSOCIATION (NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION).
- CONTRACTOR TO PROVIDE WALL BLOCKING FOR ALL SHELVING, EQUIPMENT, GRAB BARS, MOP HOLDERS, FIXTURES, AND SIMILAR ACCESSORIES FOR FIRM SUPPORT. COORDINATE WITH ALL CONTRACTOR, OWNER AND EQUIPMENT SUPPLIER REQUIREMENTS PRIOR TO ENCLOSING FRAMING.
- WOOD TREATMENT: PRESSURE TREAT ALL SILLS AND PLATES AND ANY OTHER WOOD IN CONTACT WITH MASONRY, CONCRETE OR GROUND, AND AS SHOWN ELSEWHERE ON DRAWINGS. PRESSURE TREATMENT SHALL COMPLY WITH ANWP STANDARDS C2 AND LP-22.
- FASTENERS FOR PRESERVATIVE TREATED WOOD SHALL BE HOT-DIPPED ZINC COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE, OR COPPER.

DIVISION 06 - CASEWORK

- THE CASEWORK SUBCONTRACTOR/SHOP SHALL PROVIDE A COMPLETE SET OF CASEWORK SHOP DRAWINGS TO THE GENERAL CONTRACTOR FOR USE AND REFERENCE PERTAINING TO THE CONSTRUCTION OF THE PROJECT. THESE SHOP DRAWINGS SHALL BE CONSIDERED AS AN INTEGRAL PART OF THE CONTRACT DOCUMENTS FOR THE CONSTRUCTION OF THE PROJECT.
- ALL CASEWORK ITEMS SHALL BE FURNISHED TO THE JOBSITE IN PREFINISHED CONDITION (I.E. STAINED, SEALED, LAMINATED, AND SIMILAR FINISHES) UNLESS SPECIFICALLY NOTED OTHERWISE.
- CABINETS ARE TO BE FLUSH OVERLAY CONSTRUCTION MEETING AMERICAN WOODWORKERS INSTITUTE (AWI) CUSTOM GRADE STANDARDS.

DIVISION 06 - LAMINATE PLASTICS

- SURFACING SHALL BE MELAMINE SURFACE LAMINATED PLASTIC. SHEET BACKING PANELS SHALL BE OF SIMILAR MATERIAL AND THICKNESS, WITHOUT DECORATIVE FINISH. CORE MATERIAL SHALL BE 3/4" THICK MEDIUM DENSITY PARTICLEBOARD. MINIMUM WEIGHT 40 LBS PER CUBIC FOOT. COUNTERTOPS SHALL BE FABRICATED IN SINGLE LENGTHS UP TO 12'-0". COUNTERTOPS OVER 12'-0" LENGTH SHALL HAVE HAIRLINE JOINTS. ALL EXPOSED EDGES TO BE SMOOTH, SHARP, CLEAN. PROVIDE OPENINGS (I.E. SINKS, GROMMETS, EQUIPMENT, RESTROOM ACCESSORIES, AND SIMILAR PENETRATIONS) IN COUNTERTOP AS REQUIRED FOR EQUIPMENT. CONSULT WITH OWNER TO CONFIRM LOCATIONS.

DIVISION 07 - THERMAL AND MOISTURE PROTECTION

- RIGID PERIMETER INSULATION SHALL BE ASTM C578, TYPE IV; COMPRESSIVE STRENGTH: 25 LB. PER SQUARE INCH, MINIMUM (ASTM D1621); WATER ABSORPTION: 0.1% BY VOLUME, MAXIMUM (ASTM C272). FOAM BLOWING AGENT SHALL PROVIDE AT LEAST 90% REDUCTION IN OZONE DEPLETION POTENTIAL AS COMPARED WITH STANDARD CFC BLOWING AGENTS. AGED R-VALUE 4.4 PER INCH @ 75°F - THICKNESS AS INDICATED OR OF THICKNESS TO ACHIEVE NOTED R-VALUE.
- FIBERGLASS BATT INSULATION FOR CONCEALED INSTALLATIONS: KRAFT-FACED THERMAL BATT INSULATION COMPLYING WITH ASTM C665, TYPE II, CLASS C, WITH MAXIMUM FLAME SPREAD OF 25 AND SMOKE-DEVELOPMENT OF 450 OR LESS.
- FIBERGLASS BATT INSULATION FOR EXPOSED INSTALLATIONS (INCLUDING ANY FACINGS): SHALL HAVE A FLAME SPREAD RATING PER CURRENT GOVERNING CODE. INSULATION SHALL BE FSK (FOL) OR PSK (POLY) FACED FIBERGLASS THERMAL BATT INSULATION COMPLYING WITH THE FLAMESPREAD REQUIREMENTS LISTED ABOVE, OR UNFACED HIGH DENSITY MINERAL FIBER, WITH STRAPPING AS REQUIRED BE HELD IN PLACE.
- EXTERIOR SEALANTS: SHALL BE NON-SAG, SILICONE TYPE. COLOR TO MATCH ADJACENT EXTERIOR MATERIALS, OR EXTERIOR DOOR OR WINDOW FRAMES. SUBMIT SAMPLES TO ARCHITECT FOR APPROVAL. NOTE THAT MORE THAN (1) SEALANT COLOR WILL BE REQUIRED. VERIFY COLOR LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION.
- INCLUDE SILL PLATE INSULATION, CAULKING OF SILLS AND PLATES AND FOAM INJECTIONS AT WINDOW AND DOOR SILL SPACES.
- PROVIDE 15MIL VAPOR BARRIER UNDER CONCRETE SLAB ON GRADE. SEAL ALL JOINTS & PENETRATIONS.
- PROVIDE 60 MIL BITUTHENE WATERPROOFING MEMBRANE WITH 1/2" PROTECTION BOARD AT ALL BELOW GRADE, EXTERIOR WALLS. CONTINUE MEMBRANE AND PROTECTION BOARD OVER TOP OF FOOTING, WHERE GRADE IS LESS THAN 8" BELOW FINISH FLOOR. EXTEND MEMBRANE 12" UP BEHIND MOISTURE BARRIER.
- MOISTURE BARRIER BASIS-OF-DESIGN SHALL BE DUPONT TYVEK FLUID APPLIED WEATHER BARRIER, OR EQUAL, CONTINUOUS ON ALL WALL SURFACES, AND INTEGRATED WITH EMBEDDED FLASHING COMPONENTS.

DIVISION 07 - GUTTERS AND FLASHING

- METAL FLASHING AND ROOF TRIM - STAINLESS STEEL FLASHINGS TO BE MINIMUM 24 GAGE, ASTM A 167, SOFT ANNEALED, WITH NO 20 FINISH @ INTERSECTIONS OF ROOF & VERTICAL WALLS & OTHER INTERRUPTIONS TO THE DOWNWARD FLOW OF MOISTURE. METAL FLASHING TO BE ATTACHED WITH SCREWS AND NEOPRENE WASHERS.
- GUTTERS AND DOWNSPOUTS SHALL BE FACTORY FINISHED METAL, 0.027 INCH THICK - GAGE, ASTM A 167, SOFT ANNEALED, WITH NO 20 FINISH @ INTERSECTIONS OF ROOF & VERTICAL WALLS & OTHER INTERRUPTIONS TO THE DOWNWARD FLOW OF MOISTURE. ALL GUTTERS TO BE "K" STYLE PRE-FINISHED SEAMLESS FLASHING WITH OVERSIZED DOWNSPOUTS.
- ROOF SCUPPERS AND OTHER FINISHED STEEL FLASHING TO BE MINIMUM 24 GAGE, ASTM A 167, SOFT ANNEALED, WITH NO 20 FINISH. NON-SPECIFIC METAL FLASHING SHALL BE 24 GAGE ALUMINUM, FACTORY FINISHED, COLOR TO MATCH SURROUNDING CONSTRUCTION. ALL FLASHING TO HAVE WATER-TIGHT SEAMS WITHOUT EXPOSED FASTENERS, DETAILED PER SMACNA STANDARDS.
- CAP FLASHING SYSTEM TO BE .050" ALUMINUM OR 24 GAGE GALVANIZED STEEL, FACTORY FINISHED, COLOR AS SHOWN IN DRAWINGS. ALL CAP FLASHING TO BE FACTORY FORMED, DESIGNED WITH INTERNAL GUTTERDRAIN CHAIR, DETAILED PER SMACNA STANDARDS, AND DESIGNED FOR THERMAL EXPANSION/CONTRACTION. CLEATS SHALL BE 20 GAGE GALVANIZED STEEL, COPING TO HAVE CONCEALED SPLICE PLATES TO MATCH COPING COLOR & FINISH, WITH NO EXPOSED FASTENERS. INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS, UTILIZING FASTENERS AS SPECIFIED BY MANUFACTURER FOR USE WITH COPING SYSTEM AND SUB-STRUCTURE INDICATED IN DRAWINGS.

DIVISION 07 - ROOFING SYSTEMS (METAL)

- STANDING SEAM METAL ROOFING SHALL BE MINIMUM 24 GAGE ZINC COATED SHEET STEEL, ASTM A653/A593M, .030 12" FACTORY FORMED WIDE PANS, 1-1/2" SEAM HEIGHT, FACTORY PRIMED AND FINISHED WITH FLOPOROLYMER TWO-COAT ORGANIC FINISH SYSTEM, COLOR AS SELECTED BY OWNER FROM MANUFACTURER'S FULL RANGE, 20 YEAR FINISH WARRANTY; "FIELD-LOK" SERIES BY ATLAS, OR EQUAL.
- PANELS SHALL BE CONTINUOUS FROM RIDGE TO EAVE, AND MECHANICALLY JOINED BY ROLLER MACHINE PER MANUFACTURER'S WRITTEN SPECIFICATIONS. PANELS SHALL BE MOUNTED WITH CONCEALED CLEATS 12" ON CENTER, TO ALLOW PANEL MOVEMENT, WITH CONTINUOUS SEALANT BEAD IN SEAM AND DOUBLE FOLD. NO EXTERNAL FASTENERS WILL BE PERMITTED.
- UNDERLAYMENT SHALL BE TYPE II NO. 30 ASPHALT - SATURATED ORGANIC FELT, ULT ROSIN SIZED, BUILDING PAPER SLIP SHEET. ROOF SYSTEM TO COMPLY WITH UL 580 FOR CLASS 115 WIND UPLIFT RESISTANCE.
- PROVIDE SNOW GUARDS (COLOR TO MATCH ROOF) AT MANUFACTURER RECOMMENDED SPACING.
- NO PARTIAL PANEL SHALL BE LESS THAN 6" WIDE. ALL SCREWS SHALL EXTEND THROUGH INSULATION AND INTO ROOF STRUCTURAL DECK BELOW, TO BE DETERMINED BY STANDING SEAM ROOF MANUFACTURER AND STRUCTURAL ROOF DESIGNER.

DIVISION 07 - ROOFING SYSTEMS (MEMBRANE)

- RUBBER MEMBRANE ROOFING SYSTEM SHALL BE SURE-WELD TPO ROOFING SYSTEM, 60 MIL FULLY ADHERED, BY CARLSLE ROOFING SYSTEMS OR EQUAL, AND SHALL BE INSTALLED PER MANUFACTURER'S STRICT INSTALLATION GUIDE SPECIFICATIONS. MEMBRANE TO BE PLACED OVER RIGID INSULATION (CARLSLE HPH POLYISOCYANURATE OR EQUAL, THICKNESS AS REQ. PER DRAWINGS) AND STAGGER JOINTS. MECHANICALLY ATTACH INSULATION WITH #14 SCREWS AS REQUIRED BY CODE. PROVIDE ALL REQUIRED ADHESIVES, SEALANTS, AND FASTENERS AS SHOWN IN DRAWINGS. CONSULT MANUFACTURER'S SPECIFICATIONS FOR SEALANT TYPES REQUIRED.
- GENERAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION. PROVIDE ALL REQUIRED BOOTS, CURBING, WALK-PADS (TO AND AROUND ALL HATCHES, DOORS AND EQUIPMENT) AND INCIDENTAL ACCESSORIES. INSTALL PER ROOFING MEMBRANE MANUFACTURER'S GUIDELINES.
- WARRANTY PERIOD: 20 YEARS, TO INCLUDE ALL FLASHING.

DIVISION 08 - OPENINGS

- ALL NEW DOORS TO BE MINIMUM 3'-0" WIDE X 7'-0" TALL UNLESS OTHERWISE NOTED. PROVIDE "LEVER STYLE" HANDLES. HARDWARE SHALL BE HEAVY DUTY COMMERCIAL CUSTOM GRADE. ALL HINGES TO BE PERMANENTLY MOUNTED TO MINIMUM HEIGHT OF 38" A.F.F. THRESHOLDS TO COMPLY WITH ACCESSIBILITY. ALL HARDWARE FINISHES SHALL BE BRUSHED NICKEL UNLESS NOTED OTHERWISE.
- ALL DOORS AND FRAMES NOTED SPECIFICALLY WITH FIRE RATING CHARACTERISTICS SHALL BE INSTALLED AND MAINTAINED WITH CLEARLY IDENTIFIABLE LABELS WITH U.L. INFORMATION. ALL LABELS SHALL REMAIN UNPAINTED OR TARNISHED.
- GLAZING:
 - NON-INSULATED: 1/4" THICK, ASTM 1036, TYPE 1, QUALITY Q5.
 - TEMPERED: 1/4" THICK, ASTM 1048, TYPE 1, QUALITY Q5, FULLY TEMPERED.
 - INSULATED: (2) 1/4" THICK FLOAT GLASS SEPARATED BY A 1/2" DEHYDRATED AIR SPACE COMPLYING WITH ASTM E774. TEMPER UNITS AS REQUIRED FOR NON-INSULATED TEMPERED UNITS.

DIVISION 08 - INTERIOR DOORS

- INTERIOR STEEL DOORS: ANISI/SD-100, GRADE II, HEAVY DUTY, MINIMUM 18 GAUGE GALVANIZED FACES, SEAMS WELDED AND GROUND SMOOTH. LABEL WHERE INDICATED ON SCHEDULE. DO NOT PAINT OR CONCEAL LABELS OF FIRE RATED ELEMENTS.
- FRAMES: FABRICATE FROM 18 GAUGE, KNOCK-DOWN TYPE FOR INTERIOR DOORS, UNLESS INSTRUCTED BY OWNER OTHERWISE. PROVIDE SILENCERS ON INTERIOR FRAMES. ALL FRAMES TO RECEIVE MINIMUM 26 GAGE MORTAR BOXES IN MORTARED IN FRAMES. PROVIDE ALL ANCHORAGE DEVICES AS REQUIRED FOR WALL TYPE. ANCHORS TO BE CONCEALED TYPE. FACTORY CUT DOORS AND FRAMES FOR HARDWARE INSTALLATION. DO NOT PAINT OR CONCEAL LABELS OF FIRE RATED ELEMENTS.
- INTERIOR WOOD DOORS:
 - A. RATED DOORS: 1-3/4" THICK, S-PLY, CROSSBANDDED CONSTRUCTION, NON-COMBUSTIBLE CORE, PAINT GRADE WOOD FACE, FACTORY PRIMED & PAINTED. DO NOT PAINT OR CONCEAL LABELS OF FIRE RATED ELEMENTS.
 - B. NON-RATED DOORS: 1-3/4" THICK, 7-PLY, CROSSBANDDED CONSTRUCTION, PARTICLE BOARD CORE, PAINT GRADE WOOD FACE, FACTORY PRIMED FOR FIELD PAINTED.

DIVISION 08 - EXTERIOR DOORS

- EXTERIOR STEEL DOORS: ANISI/SD-100, GRADE III, EXTRA HEAVY DUTY, MINIMUM 16 GAGE GALVANIZED STEEL FACES, SEAMS WELDED AND GROUND SMOOTH. LABEL WHERE INDICATED ON SCHEDULE. INSULATED CORE, R-5 MINIMUM.
- EXTERIOR ALUMINUM CLAD DOORS BASIS-OF-DESIGN SHALL BE MARVIN SIGNATURE COLLECTION ULTIMATE SERIES AND HISTORIC REHABILITATION DOORS.
 - A. CLAD WOOD DOOR UNITS SHALL BE 0.062" ALUMINUM CLAD WOOD. FINISH TO MEET AAMA 2604.
 - B. PROVIDE 3/4" LOW-E INSULATED GLAZING.
 - C. COLOR TO BE BROWN/BRONZE WITH WHITE TRIM & MULLION BETWEEN DOORS EXCEPT FRONT ENTRY DOOR WHICH SHALL BE BROWN/BRONZE WITH BROWN/BRONZE TRIM & MULLION BETWEEN DOORS.
- FRAMES: FABRICATE FROM 16 GAGE GALVANIZED STEEL FOR EXTERIOR APPLICATIONS. FRAMES WITH WELDED CORNERS FOR EXTERIOR DOORS, UNLESS INSTRUCTED BY OWNER OTHERWISE. PROVIDE WEATHERSTRIPPING FOR EXTERIOR DOORS. ALL FRAMES TO RECEIVE MINIMUM 26 GAGE MORTAR BOXES IN MORTARED IN FRAMES. PROVIDE ALL ANCHORAGE DEVICES AS REQUIRED FOR WALL TYPE. ANCHORS TO BE CONCEALED MD TYPE. FACTORY CUT DOORS AND FRAMES FOR HARDWARE INSTALLATION.
- INSULATED GLAZING SHALL BE (2) 1/4" THICK FLOAT GLASS SEPARATED BY A 1/2" DEHYDRATED AIR SPACE COMPLYING WITH ASTM E774. TEMPER UNITS AS REQUIRED FOR NON-INSULATED TEMPERED UNITS.
- NON-INSULATED GLAZING SHALL BE 1/4" THICK, ASTM 1036, TYPE 1, QUALITY Q5, FULLY TEMPERED.

DIVISION 08 - STOREFRONTS

- ALUMINUM WINDOWS AND STOREFRONT
 - A. BASIS OF DESIGN SHALL BE KAWNEER TRIFAB II, 451-T OR EQUAL FOR INSULATED SYSTEMS, WITH FINISH AS INDICATED IN DRAWINGS.
- PROVIDE INTERNAL STRUCTURAL STIFFENERS, EXTRUDED SILLS AND INSTALL PER MANUFACTURER STANDARD DETAIL.
- SUBMIT COMPLETE 1/4" SCALE MINIMUM ELEVATIONS AND ENLARGED DETAILS AND SAMPLE OF FINISH FOR APPROVAL.
- DOORS SHALL BE "MEDIUM STYLE", KAWNEER 350 STANDARD OR EQUAL ALUMINUM ENTRANCE DOORS, WITH 3-1/2" TOP AND SIDE RAILS AND 12" BOTTOM RAIL.
- PROVIDE STANDARD MANUFACTURER'S DOOR HARDWARE AS FOLLOWS:
 - A. KAWNEER OR EQUAL STANDARD TOP, MID, AND BOTTOM HINGES.
 - B. KAWNEER OR EQUAL "ADAMS RITE MS 1850A-505" DEADLOCK.
 - C. KAWNEER OR EQUAL "CO-9" ARCHITECTS CLASSIC SERIES EXTERIOR PULL HANDLE.
 - D. KAWNEER OR EQUAL "CP II" ARCHITECTS CLASSIC SERIES INTERIOR PULL BAR.
 - E. KAWNEER OR EQUAL "SAM II" CONCEALED OVERHEAD CLOSER.
 - F. EXTRUDED ALUMINUM THRESHOLD TO COMPLY WITH ACCESSIBILITY.
 - G. WEATHERSTRIPPING AND SWEEPS (ALL DOORS).
 - H. SEE HARDWARE SCHEDULES ON DRAWINGS FOR ADDITIONAL INFORMATION.
- WIND LOADS: PROVIDE STOREFRONT SYSTEM, INCLUDE ANCHORAGE, CAPABLE OF WITHSTANDING WIND LOAD DESIGN PRESSURES FOR COMPONENT AND CLADDING FROM THE GENERAL STRUCTURAL NOTES.
- ALL OPENINGS TO RECEIVE STOREFRONT SYSTEMS SHALL BE FIELD VERIFIED PRIOR TO FABRICATION.
- ALL STOREFRONT GLAZING AND COMMERCIAL-GLAZED SWINGING ENTRANCE DOORS SHALL BE TESTED FOR AIR LEAKAGE OF 1.57 PSF IN ACCORDANCE WITH ASTM E 283 PER VIRGINIA ENERGY CONSERVATION CODE. FOR STOREFRONT GLAZING, MAXIMUM AIR LEAKAGE RATE SHALL BE 0.3 CUBIC FEET PER MINUTE PER SQUARE FOOT OF PENETRATION AREA. FOR COMMERCIAL-GLAZED SWINGING ENTRANCE DOORS, MAXIMUM AIR LEAKAGE RATE SHALL BE 1.00 CUBIC FEET PER MINUTE PER SQUARE FOOT OF DOOR AREA.
- ALUMINUM BRAKE METAL: PROVIDE .090 ALUMINUM BRAKE METAL FLASHING, TRIM AND SUBSILLS WITH FINISHES TO MATCH ASSOCIATED SYSTEMS WHERE INDICATED ON DRAWINGS. INTEGRATE WITH STOREFRONT MEMBERS PER MANUFACTURER'S RECOMMENDATIONS TO CONSTRUCT A LEAK-FREE ASSEMBLY.

DIVISION 08 - CLAD WOOD WINDOWS

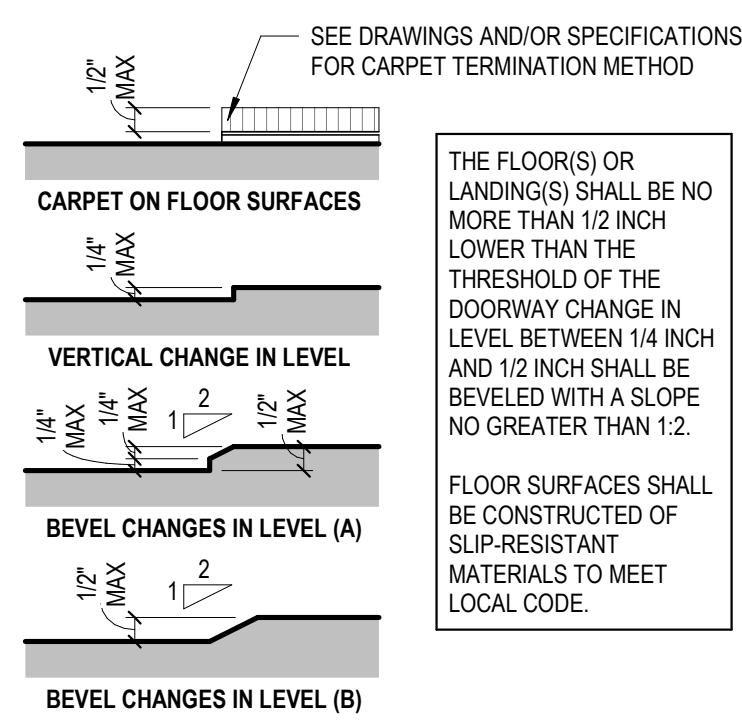
- PROVIDE A TEN (10) YEAR MANUFACTURER'S WARRANTY FOR DEFECTS AND A TWO (2) YEAR INSTALLATION WARRANTY FOR WORKMANSHIP AGAINST AIR AND WATER LEAKS, WARPING, AND SEAL BREAKAGE.
- WINDOWS BASIS-OF-DESIGN SHALL BE MARVIN SIGNATURE COLLECTION ULTIMATE SERIES AND HISTORIC REHABILITATION DOUBLE HUNG WINDOWS.
- CLAD WOOD WINDOW UNITS SHALL BE 0.062" ALUMINUM CLAD WOOD. FINISH TO MEET AAMA 2604.
- EXTERIOR COLOR SHALL BE WHITE. INTERIOR FINISH SHALL BE PAINTED WHITE.
- PROVIDE 3/4" LOW-E INSULATED GLAZING.
- WINDOWS SHALL COMPLY WITH AAMA/WDMA/CSA101/11.5.2/A440, CLASS LC-PG 40 FOR DOUBLE-HUNG, CLASS CW-PG40 FOR CASEMENT, CLASS CW-PG55 FOR FIXED.
- PROVIDE FIBERGLASS SCREENS FOR ALL OPERABLE WINDOW UNITS.
- PROVIDE JAMB EXTENSIONS, DIVIDERS OR FALSE MUNTINS (IF SHOWN), AND EX

PROJECT NO 23220008.0

Reference the edition of the Virginia Construction Code (VCC) and International Code Council (ICC) A117.1 edition cited in the Code Summary for section numbers and as the base for notes and diagrams.

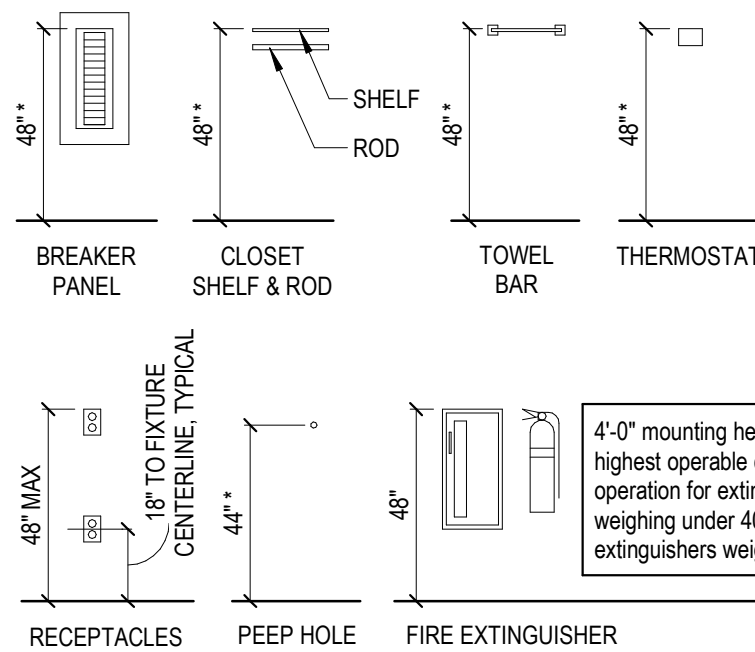
Accessibility Diagrams Disclaimer

This set of 2017 ICC A117.1 standards has been indicated here for general reference purposes only. In no way does this sheet represent all applicable components of the "Accessible and Usable Buildings and Facilities" National Standard. For clarifications, accompanying texts, descriptions, or interpretations, refer to the national standard code. The excerpts from the national standard code indicated here have been included for their relevance to this project and are not to be construed as a complete and exhaustive list. For any dimensional discrepancies, please consult the Architect.



FLOOR SURFACES & CHANGES IN LEVEL

SEE 2017 ICC A117.1 SECTION 302 & 303 FOR ADDITIONAL REQUIREMENTS



- The top of fire alarm initiating devices (boxes) shall be located no higher than 48 inches above the level of the floor working platform, ground surface or sidewalk.
- Tops of light switches, environmental controls, locks, and electrical outlets shall be mounted no higher than 48 inches above finished floor. Bottoms of electrical outlets shall be mounted no lower than 15 inches above finished floor.
- All controls in accessible spaces must meet clear floor requirements.

ADDITIONAL STANDARDS

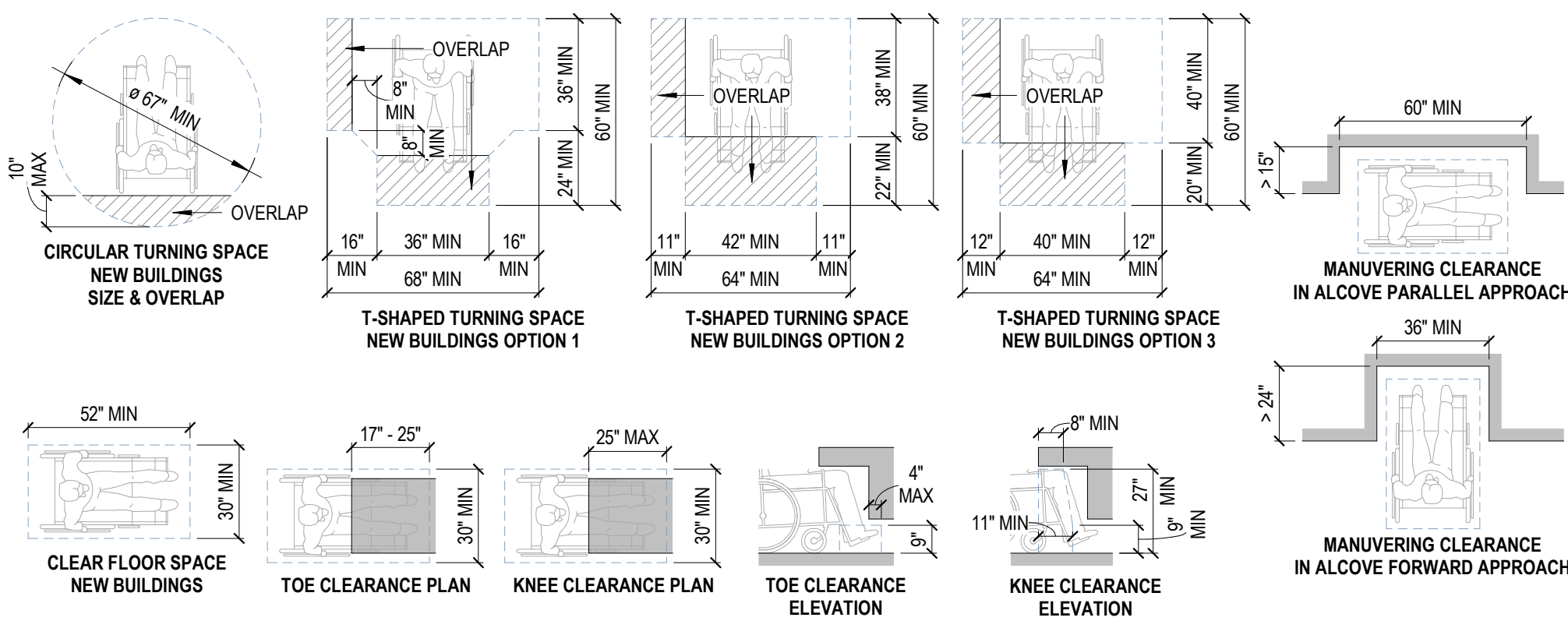
SEE 2017 ICC A117.1 SECTION 308 FOR ADDITIONAL REACH RANGE REQUIREMENTS

Door Signage

- Where a sign containing raised characters and braille is provided at a door, the sign shall be alongside the door at the latch side.
- Where a sign containing raised characters and braille is provided at double doors with one active leaf, the sign shall be located on the inactive leaf.
- Where a sign containing raised characters and braille is provided at double doors with two active leaves, the sign shall be to the right of the right-hand door.
- Where there is no wall space on the latch side of a single door, or to the right side of double doors, signs shall be on the nearest adjacent wall.
- Signs containing raised characters and braille shall be located so that a clear floor area 18 inches minimum by 18 inches minimum, centered on the raised characters is provided beyond the arc of any door swing between the closed position and 45-degree open position.
- Provide stair level identification signs at each floor level landing in all enclosed stairways adjacent to the door leading from the stairwell into the corridor to identify the floor level. The exit discharge door shall have a sign with raised characters and braille stating "EXIT".

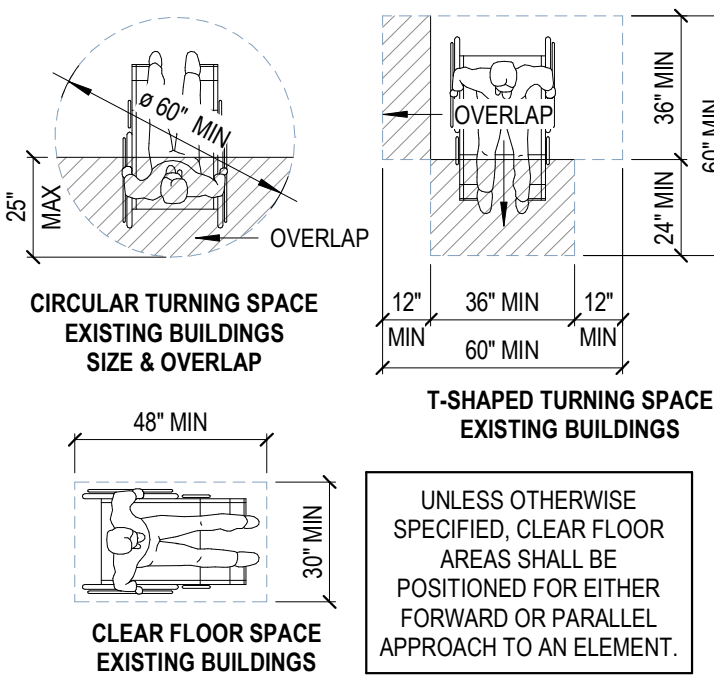
SIGNS

SEE 2017 ICC A117.1 SECTION 703 FOR ADDITIONAL REQUIREMENTS



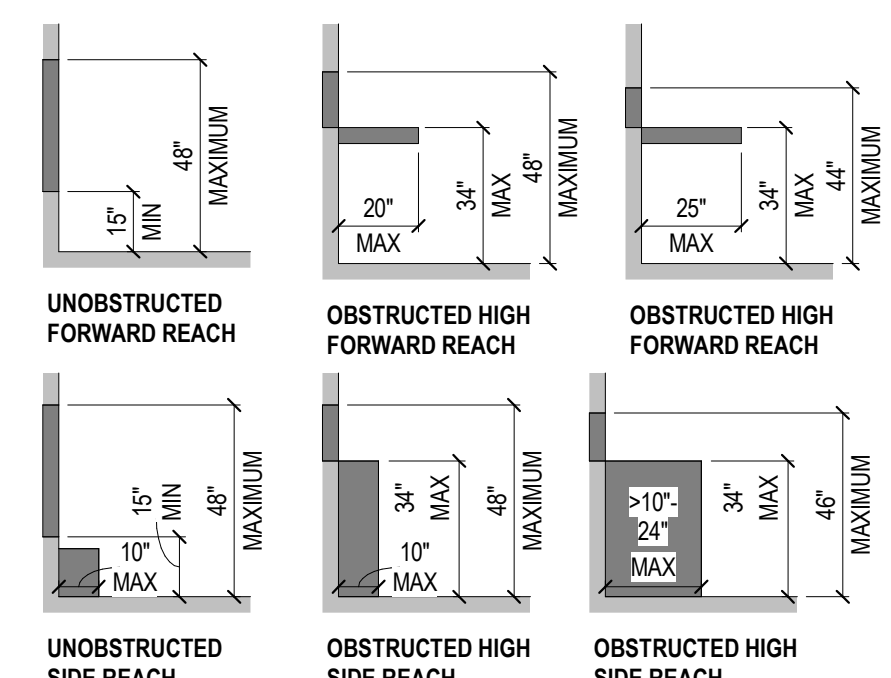
TURNING SPACE & FLOOR SPACE, KNEE & TOE CLEARANCE

SEE 2017 ICC A117.1 SECTION 304, 305, 306 & 307 FOR ADDITIONAL REQUIREMENTS



EXISTING TURNING SPACE, KNEE & TOE CLEARANCE

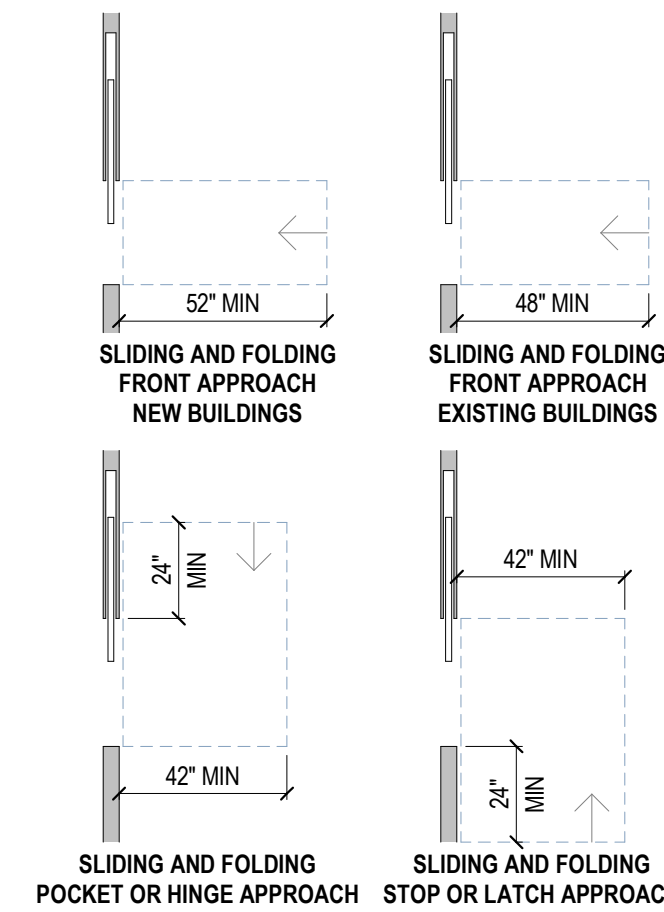
SEE 2017 ICC A117.1 SECTION 304, 305, 306 & 307 FOR ADDITIONAL REQUIREMENTS



NOTE: PER 2021 VIRGINIA CONSTRUCTION CODE SECTION 1110.15 EXCEPTION 1, OPERABLE PARTS THAT ARE INTENDED FOR USE ONLY BY SERVICE OR MAINTENANCE PERSONNEL SHALL NOT BE REQUIRED TO BE ACCESSIBLE.

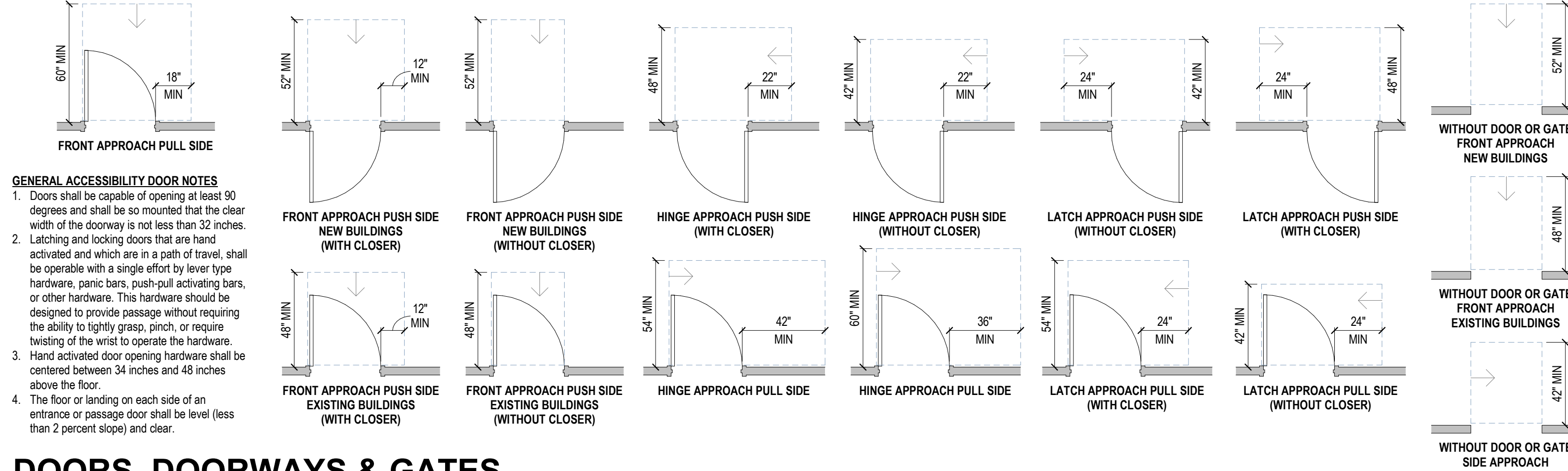
REACH RANGES

SEE 2017 ICC A117.1 SECTION 308 FOR ADDITIONAL REQUIREMENTS



SLIDING DOORS

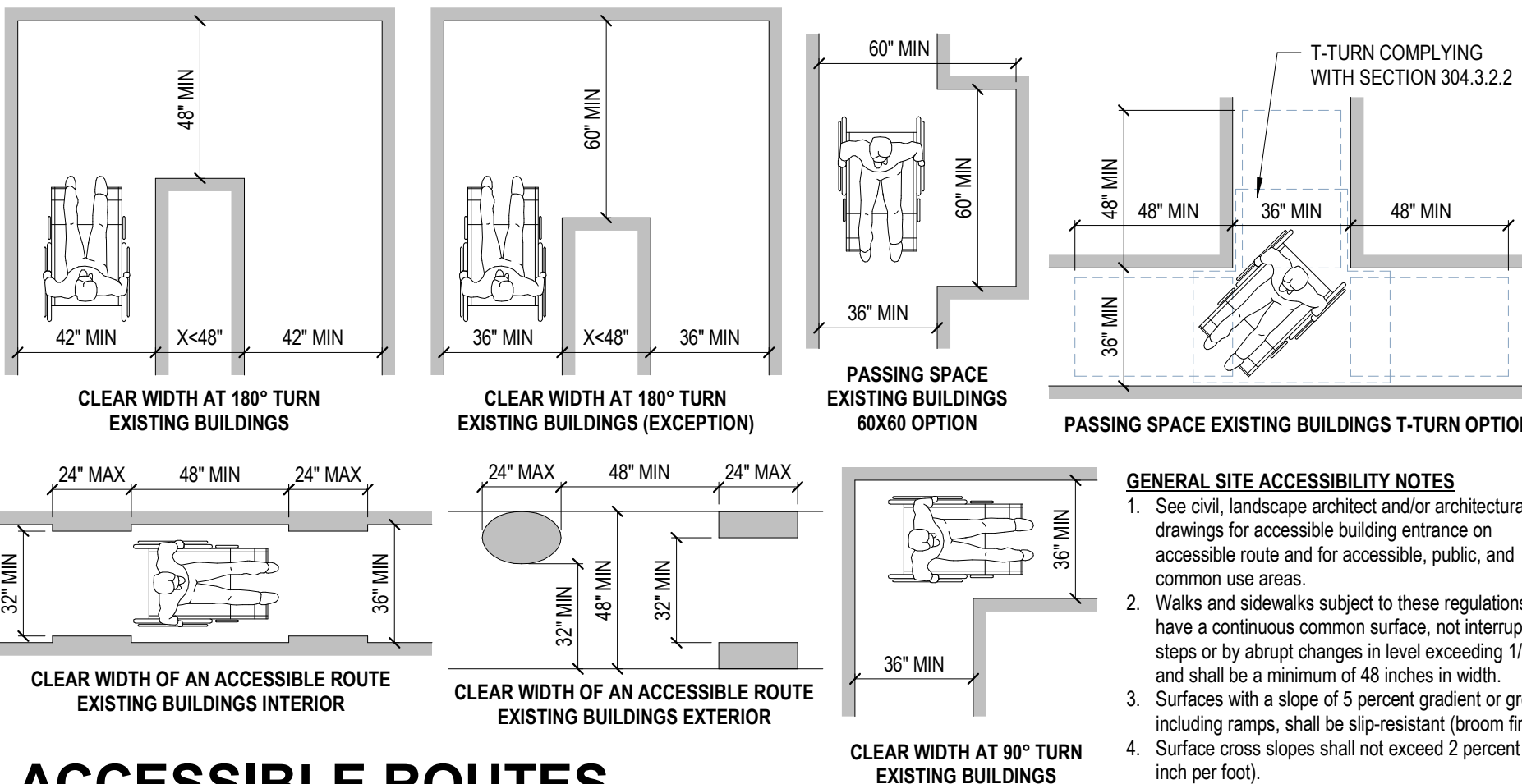
SEE 2017 ICC A117.1 SECTION 404 FOR ADDITIONAL REQUIREMENTS



DOORS, DOORWAYS & GATES

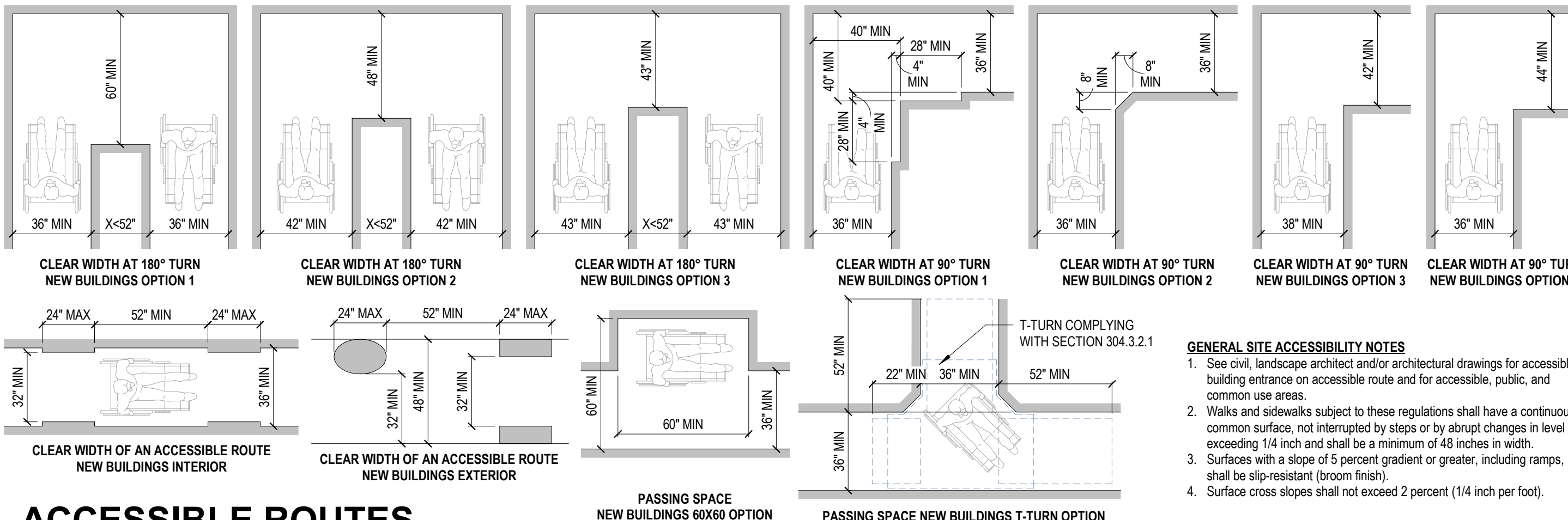
DESIGNATES APPROACH

SEE 2017 ICC A117.1 SECTION 404 FOR ADDITIONAL REQUIREMENTS



ACCESSIBLE ROUTES

SEE 2017 ICC A117.1 SECTION 403 FOR ADDITIONAL REQUIREMENTS



ACCESSIBLE ROUTES

SEE 2017 ICC A117.1 SECTION 403 FOR ADDITIONAL REQUIREMENTS



BALZER & ASSOCIATES

PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

Roanoke / Richmond
New River Valley
Shenandoah Valley

www.balzer.cc

80 College Street, Suite H

Christiansburg, VA 24073

540.381.4290



CALFEE CCC PHASE 2

HISTORIC RENOVATION

ACCESSIBILITY REFERENCE DETAILS

1 CORBIN HARMON DRIVE
FOLKSBURG, VIRGINIA 24051

DRAWN BY ARW/LMC/STC

DESIGNED BY ARW

CHECKED BY ARW

DATE 04/22/2025

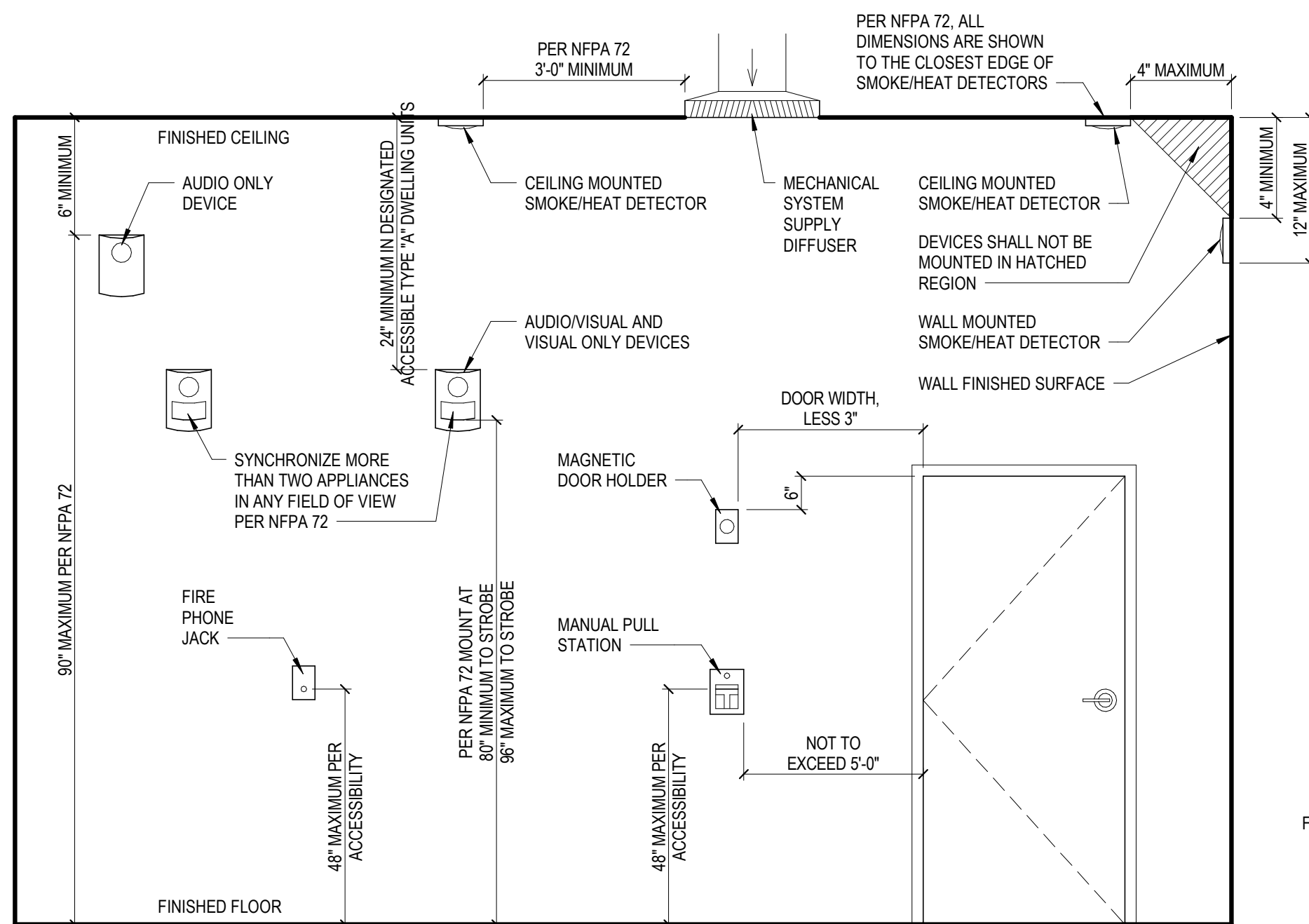
SCALE As indicated

REVISIONS

T3.01

PROJECT NO

23220008.00



LIFE SAFETY DEVICE MOUNTING HEIGHTS

NOT TO SCALE

2,952 SF EXISTING MAIN LEVEL
972 SF ADDITION MAIN LEVEL

FUTURE FIRE-SEPERATION WITH COMPLETION OF FUTURE AUDITORIUM.
MAXIMUM FIRE AREA OF 5,000 SF FOR A-2 PER VCC SECTION 903.2.1.2
FUTURE 2 HRS FIRE BARRIER PER VCC TABLE 707.3.10

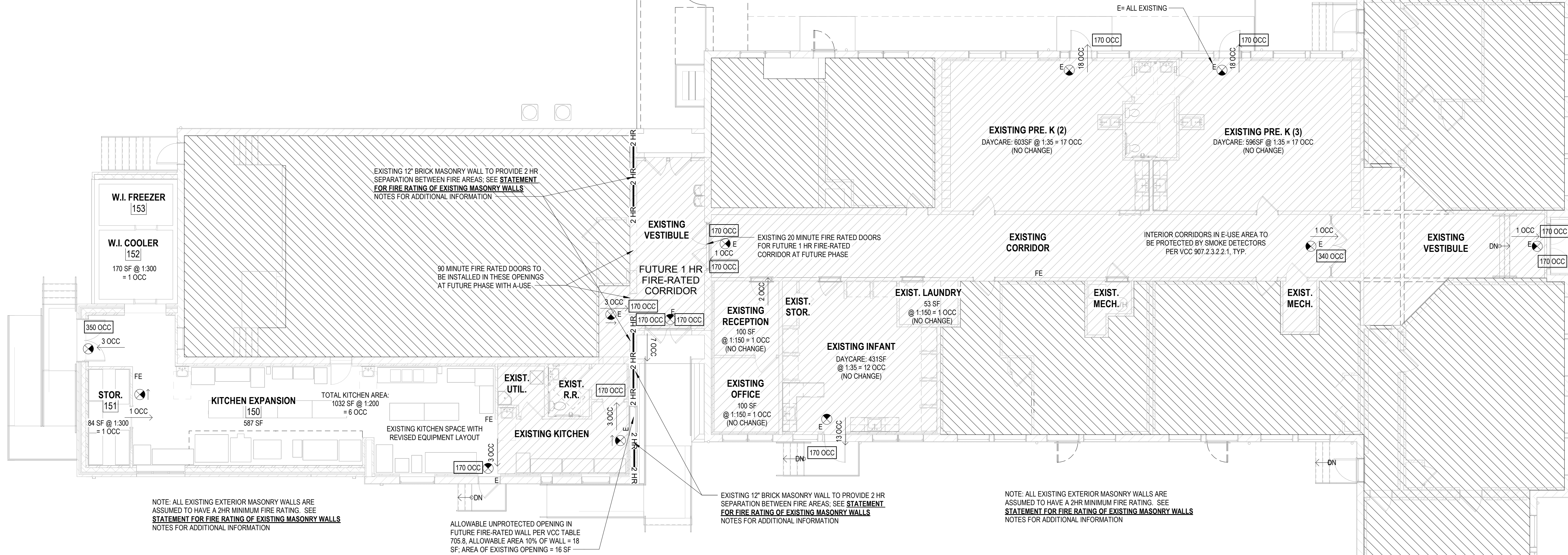
FUTURE
A USE
FUTURE FIRE AREA
3,924 SF

E USE
FUTURE FIRE AREA
8,664 SF

NOTE: ALL EXISTING EXTERIOR MASONRY WALLS ARE
ASSUMED TO HAVE A 2HR MINIMUM FIRE RATING. SEE
STATEMENT FOR FIRE RATING OF EXISTING MASONRY WALLS
NOTES FOR ADDITIONAL INFORMATION

STATEMENT FOR FIRE RATING OF EXISTING MASONRY WALLS

BASED ON LIMITED FIELD OBSERVATIONS OF VISIBLE PARTS OF THE STRUCTURE AND HISTORICAL DRAWINGS, EXISTING 12" THICK MASONRY WALLS ARE CONSTRUCTED OF EITHER 3 WYTHES OF CLAY BRICK OR A COMBINATION OF BRICK AND CMU. DUE TO THE HISTORICAL NATURE OF THE CONSTRUCTION, THE ACTUAL EQUIVALENT THICKNESS OF THE MATERIALS, THE AGGREGATES USED IN MANUFACTURING THE MATERIALS, OR THE PRESENCE OF ANY AIRSPACES IN THE WALLS ARE UNKNOWN. HOWEVER, IT CAN BE REASONABLY INFERRED THAT VALUES OF ANY OF THESE WALL ASSEMBLIES ARE LARGER THAN THE LARGEST VALUE OF 4.2 INCHES REQUIRED BY VCC TABLE 722.3.2 FOR CMU AND 4.4 INCHES REQUIRED BY VCC TABLE 722.4.1(1) FOR CLAY MASONRY, AND THEREFORE THE EXISTING WALLS MEET OR EXCEED REQUIREMENTS TO ACHIEVE A 2HR FIRE RATED ASSEMBLY.



NOTE: ALL EXISTING EXTERIOR MASONRY WALLS ARE
ASSUMED TO HAVE A 2HR MINIMUM FIRE RATING. SEE
STATEMENT FOR FIRE RATING OF EXISTING MASONRY WALLS
NOTES FOR ADDITIONAL INFORMATION

ALLOWABLE UNPROTECTED OPENING IN
FUTURE FIRE-RATED WALL PER VCC TABLE
705.8. ALLOWABLE AREA 10% OF WALL = 18
SF; AREA OF EXISTING OPENING = 16 SF

EXISTING 12" BRICK MASONRY WALL TO PROVIDE 2 HR
SEPARATION BETWEEN FIRE AREAS; SEE **STATEMENT
FOR FIRE RATING OF EXISTING MASONRY WALLS**
NOTES FOR ADDITIONAL INFORMATION

NOTE: ALL EXISTING EXTERIOR MASONRY WALLS ARE
ASSUMED TO HAVE A 2HR MINIMUM FIRE RATING. SEE
STATEMENT FOR FIRE RATING OF EXISTING MASONRY WALLS
NOTES FOR ADDITIONAL INFORMATION

WORK AREA AND EXISTING OCCUPANCY CALCULATION AND CODE NOTES:

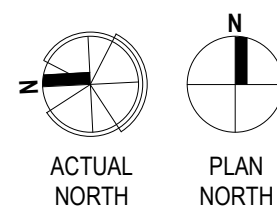
WORK AREA OCCUPANT LOAD (SEE PLAN):

E-USE 54 OCC

- BUILDING EXITS: 2 REQ'D PER VCC 1006.3.3; 14 PROVIDED (SEE PLAN).
- MAXIMUM EXIT ACCESS TRAVEL DISTANCE: 200' PER VCC TABLE 1017.2; 93' MAX. PROVIDED.
- MINIMUM CORRIDOR WIDTH: 44" PER VCC TABLE 1020.3
- CORRIDOR RATINGS: CORRIDORS SERVING A AND E OCCUPANCIES WITH OCCUPANT LOAD GREATER THAN 30 ARE REQUIRED TO HAVE 1 HOUR RATING PER VCC TABLE 1020.2
- EXIT DOORS: ALL EXIT DOORS SERVING 50 OR MORE OCCUPANTS SHALL SWING OF THE DIRECTION OF EGRESS PER VCC SECTION 1010.1.2.1
- DOOR HARDWARE: EXIT DOORS SERVING AREAS WITH MORE THAN 50 OCCUPANTS (AUDITORIUM) SHALL BE EQUIPPED WITH PANIC OR FIRE EXIT HARDWARE PER VCC SECTION 1010.2.9.
- OCCUPANCY SIGNAGE: ALL ROOMS WITH AN OCCUPANCY OF 50 OR GREATER (AUDITORIUM) REQUIRE A POSTED SIGN OUTSIDE OF THE ROOM STATING THE MAX. OCCUPANT LOAD OF THE ROOM.
- LABEL FIRE RATED WALL ASSEMBLIES ABOVE DROP CEILINGS OR IN OTHER CONCEALED SPACES @ 8'-0" O.C. MAXIMUM PER VCC SECTION 703.5

LIFE SAFETY LEGEND

- 0 OCC ACTUAL NUMBER OF OCCUPANTS USING EGRESS COMPONENT
- ### OCC EGRESS ELEMENT CAPACITY
- FE FIRE EXTINGUISHER SEMI-RECESSED CABINET
- ILLUMINATED EXIT LIGHT (WITH BATTERY BACKUP OR TIED TO EMERGENCY CIRCUIT, SEE ELEC DRAWINGS)
- ILLUMINATED EXIT LIGHT WITH DIRECTIONAL ARROW (WITH BATTERY BACKUP OR TIED TO EMERGENCY CIRCUIT, SEE ELEC DRAWINGS)
- EMERGENCY EGRESS LIGHT WITH BACKUP BATTERY
- PATH OF EGRESS
- 2 HR 2 HR RATED WALL (DURATION SPECIFIED)



**BALZER
& ASSOCIATES**
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

Roanoke / Richmond
New River Valley
Shenandoah Valley

www.balzer.cc

80 College Street, Suite H
Christiansburg, VA 24073
540.381.4290



CALFEE CCC PHASE 2

HISTORIC RENOVATION

LIFE SAFETY PLAN

1 CORBIN-HARMON DRIVE
FOLKSBURG, VIRGINIA 24051

DRAWN BY ARW/LMC/STC
DESIGNED BY ARW
CHECKED BY ARW
DATE 04/22/2025
SCALE As indicated
REVISIONS

T4.01

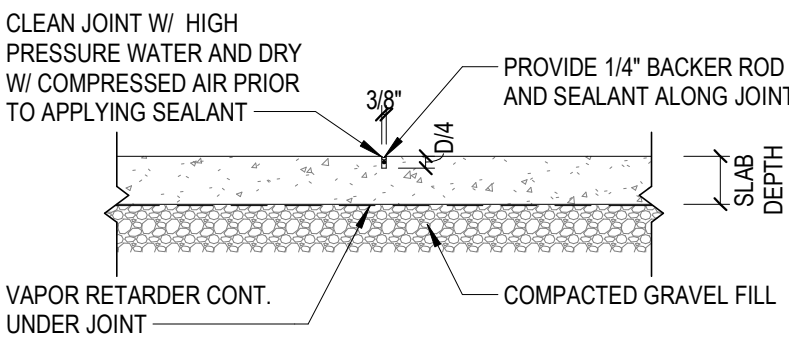
PROJECT NO 23220008.01

DIVISION 1 - GENERAL:

- In case of conflict between the general notes, specifications, and drawings regarding structural issues, the most stringent requirements shall govern.
- Structural drawings shall be used in conjunction with the architectural, mechanical, electrical, & plumbing drawings, as well as any additional drawings provided by material & equipment suppliers. Contractor shall be responsible for coordinating the work of all other trades with the structure.
- This structure is considered unstable until all structural components are in place, fastened, plumbed, true and in accordance with these signed and sealed drawings. Contractor shall be responsible for furnishing, erecting, and removing any temporary shoring and bracing during construction.
- Contractor shall strictly adhere to all safety regulations. The architect/engineer shall not be responsible for construction means, methods, or procedures for safety precautions in connection with the work.
- Construction materials, equipment, or other heavy loads shall not be placed upon structural components in concentrated areas. construction material or equipment staging shall not impart loads to the structure greater than that shown in the design load schedule.
- Work not indicated on a part of the drawings, but reasonably implied to be similar to that shown at corresponding pieces, shall be repeated.
- Temporary bracing, sheeling, shoring, etc., required to ensure the structural integrity/stability of the existing buildings, sidewalks, utilities, etc., during construction is the Contractor's responsibility and shall be designed by a Professional Engineer licensed in the Commonwealth of Virginia.
- Shop Drawings:
 - Shop drawings for materials shall be submitted to the Architect for review prior to the start of fabrication or completion of work.
 - No portion of the contract drawings may be reproduced for submittal as shop drawings unless authorized by Balzer and Associates, Inc. in writing. Violation of this provision will result in the rejection of the shop drawings and will be returned without being reviewed by the Architect or Structural Engineer.
 - Shop drawings shall bear the General Contractor's stamp of approval, which shall constitute certification that he has verified all field measurements, construction criteria, materials, and similar data and has checked each drawing for completeness, coordination, and compliance with the contract documents. Shop drawings not reviewed by the General Contractor prior to submittal will be rejected.
 - Changes to shop drawings that are re-submitted must be clouded or otherwise clearly indicate the changes that have been made to a previously issued and reviewed drawing.
 - The Contractor shall provide the Architect or Structural Engineer with written notice of deviations of any type from the requirements of the Construction Documents. The notice must be received prior to shop drawing submittal. The Contractor remains liable for any deviation unless reviewed by the Architect or Structural Engineer and acknowledged in writing, prior to receipt of the shop drawings.
 - Shop Drawings will be returned not later than 10 working days after receipt by the Architect or Structural Engineer.
 - Architect/Engineer shall not be liable for work performed without approved shop drawings.

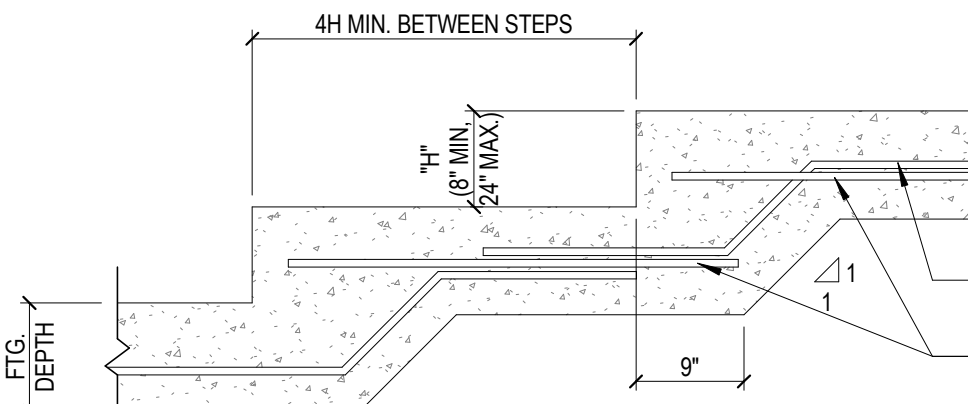
DIVISION 2 - FOUNDATION & SITE PREPARATION:

- The surface of the exposed sub-grade shall be inspected by probing or testing to check for pockets of soft or unsuitable material. All fill and unsuitable foundation material shall be removed and footings shall rest on undisturbed soil or engineered fill. Footings shall be designed for a minimum soil bearing capacity of **1,500 psf**. Preparation of soil and sub-grade beneath footings and slabs on grade shall be in accordance with the recommendations of the Owner's geotechnical engineer's report. All footing excavations, site stripping, undercutting and control fill operations shall be done under the supervision of an independent testing laboratory, under the direction of a professional engineer licensed in the Commonwealth of Virginia.
- Reference plan notes on foundation plan for additional notes and requirements. Owner shall make any other investigations he deems necessary at his cost.
- Clear site and remove all vegetation, trees, roots, decaying material and other obstructions from areas occupied by utilities and structures, etc. strip top soil to a depth of 5' or deeper as required; debris is to be completely removed from site or disposed of and is not to be deposited in fills.
- Strip all topsoil from areas to be covered by structures or pavement and fill with an approved controlled fill, compacted to 95% or better of maximum dry density as determined by Standard Proctor (ASTM D698).
- Foundations are not to be excavated until building fill is placed and compacted.
- Center footings under walls and columns unless noted otherwise.
- Footing elevations shown represent the minimum depth to which footings shall be carried and shall be lowered as required to obtain suitable bearing.
- All footings shall project at least 1'-0" into undisturbed natural soil or compacted controlled fill having a bearing value at least equal to that specified above. Place bottoms of all exterior footings at least 2'-0" below finished grade. Earth cuts may be used as forms for footing concrete. Drain all bearing strata adequately before placing foundation concrete. Do not place concrete on frozen soil.
- Proper site drainage shall be maintained in order to protect the site from excess surface moisture during construction. Protection of the site shall include the construction of temporary ditches, berms or other surface water diversion devices in order to divert surface water from and not across the site.
- Where, due to field conditions, actual bottom of footing elevations will differ from elevations shown on plans, piers and columns shall be increased, decreased, added or eliminated following intent of these drawings and specifications.
- Footing step locations indicated on the foundation plans are approximate; actual locations may vary from that shown based upon existing conditions at the site. Contractor shall locate footings step in field as required by finish grade and localized soil conditions.
- Except where unbalanced fill on foundation walls is less than 4'-0" (or as otherwise stated on drawings), backfill shall not be placed against concrete or masonry foundation walls unless the walls have attained full design strength and the top of these walls are braced against overturning in a manner satisfactory to the engineer.
- Excavations at retaining walls shall be sloped. Temporary slopes should be constructed on a slope of one horizontal to one vertical or flatter.
- All walls shall be adequately braced to resist all horizontal loads from wind, earth, and construction loads during installation and until such time as permanent anchorage is in place. Heavy compaction equipment will not be allowed within a distance substantiated by a 45° angle between the surface of the ground and any footing.
- Contractor shall include in his bid all civil engineering and site work including landscaping, seeding and straw placement at denuded/disturbed areas, as well as temporary erosion control as required by the governing jurisdiction(s).
- All underground utilities shall be referenced from site, mechanical, electrical, and plumbing drawings and connections shall be made prior to placing foundation concrete. Architect / Structural Engineer is not responsible for locating and coordinating utility interactions with building.
- Roof drain pipes serving the structure shall lie into underground perimeter foundation drain pipes and be taken to an appropriate point of discharge. Contractor to coordinate with civil drawings for daylight or underground tie-in information.
- All concrete sidewalks shall receive a broom finish unless otherwise specified on architectural or landscape drawings.



SAW CUT CONTROL JOINT

3/4" = 1'-0"



TYP. FOUNDATION STEP

3/4" = 1'-0"

DIVISION 3 - CONCRETE:

- Materials for concrete construction shall be in accordance with the following specifications:
 - Unit weight: Normal weight (145-150 pcf)
 - Portland cement: ASTM C150 Type 1
 - Water and Fine Aggregate: ASTM A615, Grade 60 deformed billet steel bars
 - Water: ASTM C1602 potable
 - Cementitious Admixtures: ASTM C618 Flyash
 - Chemical Admixtures: ASTM C989 Ground granulated blast furnace slag
 - Reinforcing steel: ASTM A615, Grade 60 deformed billet steel bars
 - Embedded fiber reinforcing: ASTM A416 7-wire steel strand for prestressed concrete (270 ksi)
 - Adhesive anchoring: Hilti HIT-HY 200 Safe Set System or approved equal
 - Concrete screws: Hilti KWIK CON II+ or Simpson Titen or approved equal
 - Heavy duty screw anchors: Hilti KWIK HUS-EZ or Simpson Titen HD
 - Expansion / wedge anchors: Hilti KWIK Bolt TZ or Simpson Strong Bolt 2 or approved equal
- Other agents, compounds, admixtures, and/or embedded items as approved by Engineer
- All concrete materials, processes, and work shall be in accordance with ACI 318-14 "Building Code Requirements for Structural Concrete", ACI 301-10 "Specifications for Structural Concrete", and ASTM C94, unless otherwise noted or detailed on the contract drawings.
- All exterior concrete slabs exposed to traffic shall be 4000 psi. All concrete slabs, on-grade or on suspended metal deck, shall be 3500 psi. Footings for walls and columns, and all other concrete, shall be 3000 psi. Refer to structural drawings for additional notes and use highest strength mix where discrepancies occur.
- All concrete exposed to freezing and thawing shall have an entrained air content of 6% (±1.5%).
- Refer to Table 19.3.2.1 "Requirements for Concrete by Exposure Class" and referenced exposure class definitions for maximum water / cementitious materials (w/c) ratio, minimum design strength, entrained air contents, and other constituent restrictions for this project.
- Contractor shall submit a concrete mix design for each type of concrete to the project Architect for approval prior to the placement of concrete.
- Contractor to provide a mockup sample of all exposed architectural concrete elements as directed by the Architect.
- All reinforcing steel shall be deformed bars of new billet steel conforming to specification listed above. Rebar splices shall be as per ACI 318. All reinforcing material continuous (cont) on the plans and details shall be lapped 48x bar diameters at splices unless otherwise noted.
- Welded wire fabric shall be lapped a minimum of one full wire space plus 2" when spliced.
- Detail, fabricate and place reinforcement in accordance with ACI 318 unless otherwise shown. Concrete protection for reinforcing steel shall be in accordance with ACI 318-14.
- All reinforcing steel shall be held securely in place to prevent dislodging during the placing operation. Slab reinforcing bars shall be supported on high chairs and bar spacers of suitable design.
- Reinforcing steel shall be clean of mud, debris, loose rust, cement grout, or any other material which may inhibit the bond between the steel and the concrete. Do not field bend reinforcing steel. In no case may bars be heated to facilitate bending.
- No concrete shall be placed until all embedded items have been installed, tested and inspected.
- Contractor shall gain approval from Structural Engineer for post-installing any column anchor rods.
- Follow manufacturer's written installation procedures for installation of all post-installed anchors in concrete work. Control silica dust per OSHA requirements and prepare hole for receiving adhesive in accordance with manufacturer's requirements. Where required, contractor shall receive certification from manufacturer for conformance to installation procedures.
- Concrete slabs on ground specified as fiber reinforced concrete shall be reinforced at minimum with macropolymeric fibers to control plastic shrinkage cracking. At the contractor's option, steel or macropolymeric fibers may be added to control random cracking upon the concrete reaching its hardened state. Macropolymeric fibers shall be added into the concrete mix at a minimum rate of 0.1% by volume (1.5 lbs per cubic yard of concrete), or as suggested by material supplier.
- Sufficient time should be allowed between saw joints in fiber reinforced concrete slabs to ensure that the saw blade cuts the fiber reinforcement without pulling the fibers out of the concrete.
- Where resilient floors are to be installed on concrete slab-on-grade, a vapor retarder (per ASTM E1745) with a maximum permeance of 0.3 perms (per ASTM E96), shall be installed over a minimum of 4" of compacted porous fill. Seal all penetrations of vapor retarder to maintain continuity. Moisture, alkali, and bond testing must be conducted prior to installation of finished flooring, in accordance with manufacturer's written Guaranteed Installation Guide.
- Floor depressions and openings to be provided where equipment or floor finishes require them, whether or not indicated on structural drawings. It shall be the contractor's responsibility to coordinate his work with architectural and mechanical drawings and specifications and provide depressions and openings as required.
- Concrete for all floor slabs shall be wet-cured with wet burlap, plastic film, waterproof paper or misting.
- Concrete slab surfaces shall conform to ASTM E1155 F-number system for flatness and levelness or as required by owner.
- Refer to structural plans for additional notes regarding concrete slabs and walls.
- Unless otherwise shown, provide #5 bar at each face around all sides of openings in concrete walls. Bars shall extend a minimum of 24" beyond the edge of the opening.
- Construction and control joints shall be located where indicated on the drawings. See typical details for additional reinforcing at construction joints.
- Where column and wall footings coincide, provide full reinforcement for both footings, with wall footing reinforcement continuous through column footing. Joints between wall footings and column footings not permitted.
- Unless otherwise required, provide 3/4" chamfer on all concrete corners exposed to view.
- Unless noted otherwise, all concrete column vertical reinforcing to be dowelled into footings with dowels same size as verticals, lap 48x bar diameters.
- Top of plumbing pipes must be at least 12" below bottom of wall footings or above. Otherwise footings must be lowered below pipe invert. Pipes shall not pass through footings. See mechanical drawings for location of pipe sleeves and penetrations. Prior approval required for cutting and bending of reinforcing to accommodate sleeving and in no case shall major reinforcing be cut or bent.
- All structural members shall be poured for their full depth in one operation. Construction joints, such as day's pour joints, shall not be located in the middle third of any span or over intermediate supports of continuous multi-span members. The reinforcement shall extend through the joint in both faces. Where, in either face, no reinforcement is called for, provide #4 dowels at 12" on center. Joint shall be roughened by use of an approved surface retarder in accordance with manufacturer's directions, to expose aggregate. Depth of etch shall be 1/8" minimum. Apply a chemical bonding agent per manufacturer's specifications prior to finishing the concrete placement.
- The concrete contractor shall cooperate with other contractors and, where required, install all built-in work, sleeves, inserts, brick ties, etc., including framework for chases, registers and other provisions for built-in work to complete the job (see specifications).
- At steel deck slabs, concrete contractor shall include in his bid additional quantity of concrete that may be required to provide a level slab at the prescribed elevation and compensate for steel deck and steel beam deflections.
- Electrical contractor shall confer with architect and structural engineer before placing any conduits in concrete construction in order to agree on permissible arrangements of conduits.
- Electrical contractor shall prevent placing conduits in concrete that will impair concrete strengths.
- Only conduits having outside diameters no larger than one-third of the slab thickness may be installed. For slabs on steel deck, slab thickness shall be considered as thickness of concrete above upper deck flutes.
- Conduits are to be spaced so as to provide no less than three (3) conduit diameters, center-to-center. Wherever possible, larger spacings are preferred.
- Continuous rows of conduits are not to be placed immediately along bearing ends of slabs.
- Aluminum conduits are not allowed.
- Conduits are not allowed in concrete slabs less than 4" thick.
- Crossover of conduit shall not be allowed in steel deck slabs.

EXISTING CONCRETE:

- Existing concrete components are to remain in place, except as shown on demolition plans for new openings and floor alterations. Existing deteriorated concrete shall be reinforced or replaced in the field as conditions require. Contractor shall notify engineer of questionable areas not noted on plans for further direction.
- New repair mortar mixes shall be provided as directed by the structural engineer. Refer to plans and details for specific notes.
- Size, spacing, and depth from concrete surface of existing steel reinforcing bars embedded in concrete elements shall be verified in field as directed by structural engineer.
- Use Hilti HIT-HY 200 epoxy where anchorage must be made into existing concrete.
- Support free edges of elevated concrete slabs at new floor openings as indicated in the structural drawings.
- Typical repair details and notes shall be applied to the full extent of all existing concrete slabs, walls, and structural members as needed. General contractor shall coordinate with concrete subcontractor for full extent of repair work.

DIVISION 4 - MASONRY:

- Materials for concrete masonry walls shall be in accordance with the following specifications:
 - Hollow load bearing units: ASTM C90 Type 1, Grade N, 1,350 psi on the net area
 - Maximum weight: 32 lbs per 8" x 8" x 16" unit, 47 lbs per 12" x 8" x 16" unit
 - Grout: ASTM C476, f_c = 2000 psi
 - Mortar: ASTM C270, Type M (below grade), S (structural), or N (veneer, non-structural)
 - Reinforcing steel: ASTM A615, Grade 60
 - W/M A615: Grade 60 (galvanized) or ASTM A580 (stainless)
 - Adhesive anchoring: Hilti HIT-HY 270 or Simpson AT-XP or SET-XP or approved equal
 - Masonry screws: Hilti KWIK CON II+ or Simpson Titen or approved equal
 - Heavy duty screw anchors: Hilti KWIK HUS-EZ or Simpson Titen HD
 - Expansion / wedge anchors: Hilti KWIK Bolt 3 or Simpson Wedge All or approved equal
 - All concrete masonry work shall be in accordance with TMS 402, ACI 530 and TMS 403.
 - All engineered concrete masonry shown on the contract drawings has been designed based on full allowable stresses. Special inspection by a qualified inspector shall be required.
 - All masonry shall be laid in running bond unless otherwise noted on the architectural drawings. Build all masonry level, square, plumb and true. Provide standard 9 ga. galvanized steel truss type horizontal joint reinforcing for masonry walls greater than 4" thick, see drawings for vertical reinforcement.
 - Provide vertical control joints at a maximum of 25' o.c. spacing in all masonry walls unless noted. See architectural elevations for control joint locations.
 - Veneer masonry shall be anchored to studs with 3/16" gage hot-dipped, galvanized steel adjustable wire anchors at 24" o.c. horizontal and 16" o.c. vertical. Anchors shall be X-Seal Anchor (for continuous perimeter insulation) or DVI-10 (direct to sheathing) by Hohmann & Barnard or approved equivalent. Provide mortar bed at all flashing points. Install per manufacturer's written instructions using specified fasteners, tape, and other accessories as necessary. Maintain minimum airspace between veneer masonry and wall sheathing/insulation as required per architectural drawings.
 - Face Brick: See architectural drawings for all notes, specifications, and details regarding face brick and/or other veneer masonry.
 - See architectural drawings for all notes, specifications, and details regarding flashing and weeps.
 - Provide rebar dowels of the same size and spacing as vertical reinforcing from wall and stand footings. Dowels shall have standard ACI hooks and shall lap, unless noted otherwise, 48x bar diameter with first lift of vertical reinforcing.
 - Vertical bars denoted each face (EF) in masonry walls shall be placed 1/2" clear from face or cell wall, or as noted in structural details.
 - All poured or pumped grout shall be fine grout, with slump 8"-10". Grouting to be placed in lifts not to exceed the limitations stated in ACI 530. Grouting procedures to be fully monitored and inspected by special inspections engineer. Provide inspection points at bottom of each grout lift over 5'-4" in height as required on the outside face of the CMU. Stop grout for each lift 1" below top of last CMU course, with the exception of the top course of the CMU wall. Each grouted cell shall be mechanically consolidated, either by using a mechanical "bee" vibrator for a maximum of two seconds or by trowling with a separate piece of reinforcing steel bar of length sufficient to reach to the bottom of the grout lift. Grout shall be re-consolidated upon water loss by similar means.
 - All hollow masonry walls that change in thickness or number of wythes shall have a course of solid or grout filled units at the transition.
 - Walls shall be grout as soon as possible to prevent shrinkage cracking. Masonry shall be allowed to cure a minimum of 24 hours prior to grout placement.
 - The top of unfinished masonry work and all stored masonry materials shall be covered to protect the masonry material from the weather.
 - Masonry spalls shall not be supported on wood girders or other form of wood construction. Provide steel lintels bearing on solid masonry above all openings.
 - Ample time shall be allowed for masonry to be cured and washed with warm clean water, and free of excess mortar. Clean all other work affected by mortar spills and washing.
 - Loose steel angle lintels shall conform to ASTM A36 for steel. All lintels to have 8" minimum bearing on one course of solid or grouted masonry units, unless noted otherwise. All loose lintels to be provided by structural steel from the weather.
 - Provide angle 1x3x1/2x5x16" for each 4" of masonry wall thickness over gillies, louvers, panel boxes, ducts and other miscellaneous openings not listed in schedule.
 - Use two courses of solid grouted CMU under all joints bearing into masonry walls.
 - Follow manufacturer's written installation procedures for installation of all post-installed anchors in masonry walls. For adhesive anchoring into hollow walls use appropriately sized screen tube in oversized hole. Control silica dust per OSHA requirements and prepare hole for receiving adhesive in accordance with manufacturer's requirements. Where required, contractor shall receive certification from manufacturer for conformance to installation procedures.

EXISTING MASONRY:

- Existing masonry components are to remain in place, except as shown on demolition plans for new openings. Existing deteriorated masonry units shall be replaced, and damaged, deteriorated, or replaced mortar joints shall be reported in the field as conditions require. Contractor shall notify engineer of questionable areas not noted on plans for further direction.
- New masonry units and mortar mixes shall be provided with materials as close to original composition as possible. New units and mortar mixes of greater compressive strength than original materials shall not be permitted.
- Deteriorated, out-of-plumb, cracked, or damaged brick shall be replaced/repaired as required.
- Mason to repair all masonry where mortar joints have deteriorated.
- Mason to remove outer wythe of brick, and center wythe bricks as found to be cracked, broken, degraded, or necessary in order to provide shown reinforcement. Verify actual extent of brick damage in field.
- Helixbar stainless steel reinforcing dowels as manufactured by Helifix shall be provided as shown in structural details for masonry reinforcement. Dowels to be placed within collar joint between outer two wythes of brick. Dowels shall be fully embedded within mortar joints, and shall be drilled min. 6" into remaining undamaged existing brick. Use Helibond injectable cementitious grout for all Helifix repairs. Dowels shall be cut from stock length as required to provide stated embedment into existing masonry and extend to within 4" of the outside corner of the building.
- Use Hilti HIT-HY 70 epoxy where anchorage must be made into existing brick masonry walls.
- Re-use existing bricks where practical. New bricks and mortar mix shall match existing materials as close as possible. Mortar shall be air-entrained for durability and shall not contain Portland cement.
- Repair details and notes shall be applied to the full extent of all existing masonry walls. General contractor shall coordinate with mason for full extent of repair work.
- Mason chosen for repair and rehabilitation of existing masonry walls shall be experienced in the materials and methods of historic masonry work.

DESIGN LOAD SCHEDULE (2021 VCC)

| | |
|---|--------------------|
| DESIGN ALLOWABLE SOIL BEARING CAPACITY: | 1500 psf (ASSUMED) |
| DEAD LOADS: | |
| SECOND FLOOR DEAD LOAD: | 20 psf |
| ROOF DEAD LOAD: | 20 psf |
| UNREDUCED LIVE LOADS: | |
| FIRST FLOOR LIVE LOAD: | 100 psf |
| ROOF LIVE LOAD: | 20 psf |
| SNOW LOADS: | |
| GROUND SNOW LOAD: | 30 psf |
| SLOPED ROOF SNOW LOAD: | 21 psf |
| SNOW EXPOSURE FACTOR: | 1.0 |
| IMPORTANCE FACTOR: | 1.0 |
| THERMAL FACTOR: | 1.0 |

***THERE ARE NO CHANGES TO THE SNOW DRIFTING OR UNBALANCED SURCHARGE LOADS ON THE EXISTING STRUCTURE AS A RESULT OF THE PROPOSED NEW CONSTRUCTION.**

| | |
|--------------------------------|----------------------|
| WIND LOAD DESIGN CRITERIA: | ASCE 7-16 CHAPTER 27 |
| ANALYSIS PROCEDURE: | ENCLOSED |
| BUILDING TYPE: | 115 mph |
| ULTIMATE DESIGN WIND SPEED: | 89 mph |
| NOMINAL DESIGN WIND SPEED: | II |
| RISK CATEGORY: | II |
| EXPOSURE: | ±B |
| INTERNAL PRESSURE COEFFICIENT: | ±0.18 |

***THERE ARE NO CHANGES TO THE DESIGN WIND PRESSURE REQUIREMENTS OF THE EXISTING STRUCTURE AS A RESULT OF THE PROPOSED NEW CONSTRUCTION.**

| | |
|-------------------------------|----------------------|
| SEISMIC LOADS: | |
| RISK CATEGORY: | II |
| IMPORTANCE FACTOR: | 1.0 |
| MAPPED SPECTRAL ACCELERATION: | S _s =0.23 |
| | S ₁ =0.06 |
| | D |

| | |
|--------------------------|----------------------|
| SITE CLASS: | F _a =1.20 |
| SITE CLASS COEFFICIENTS: | F _v =1.70 |

| | |
|--------------------------------|----------------------|
| SPECTRAL RESPONSE COEFFICIENT: | S _s =0.06 |
| | S ₁ =0.24 |

SEISMIC DESIGN CATEGORY:

***THERE ARE NO CHANGES TO THE SEISMIC DESIGN REQUIREMENTS OF THE EXISTING STRUCTURE AS A RESULT OF THE PROPOSED NEW CONSTRUCTION.**

DIVISION 6 - WOOD CONSTRUCTION:

- Wood materials for use in construction shall be in accordance with the following specifications:
 - Dimensional lumber: 2x8 or larger: Southern Yellow Pine (SYP) #2 or greater
 - Engineered lumber: 2x8 or smaller: Spruce Pine Fir (SPF) #2 or greater
 - Joists: As specified on plans
 - Beams and girders: 2 OE, min. fb = 2,600 psi
 - Columns and posts: 1.8E, min. fb = 2,400 psi
 - Beams and girders: 1.8E, min. fb = 2,400 psi
 - Columns and posts: 1.8E, min. fb = 2,400 psi
 - Nails specified on structural drawings to be common wire nails unless noted otherwise (refer to NDS for sizes other than listed)
 - Wood screw manufacturers: Simpson, Fastenmaster LOK, USP (various types and applications, others available subject to approval of engineer)
 - Lag screws: Manufactured to ANSI B18.2.1
 - Bolts: ASTM A307 with common or plate washer under nut and head
 - Proprietary metal clips: Simpson Strong-Tie or USP
 - Power driven fasteners for sill plates: min. 0.145"x2-1/8" max. length w/ washer
- Wood construction shall conform to the requirements of the American Institute of Timber Construction and the 2012 "National Design Specification for Wood Construction" from the National Forest Products Association.
- Unless otherwise noted, all connections shall conform to the "Fastening Schedule", Table 2304.9.1 of the International Building Code (IBC 2021).
- Contractor shall install permanent bracing or solid blocking spaced at 8'-0" o.c. maximum between wood joists unless noted otherwise.
- Sheathing shall conform to APA specifications. End joints shall occur over supports. Panels shall be staggered on half panel length from adjacent panels. Provide 1/8" space at panel ends. Wall sheathing shall be minimum 7/16", and roof sheathing shall be minimum 19/32", "APA rated sheathing", 24/16 panel span rating, exposure 1. All panels shall be nailed as indicated on structural drawings.
- All dimensions are to outside face of sheathing unless otherwise noted. See architectural drawings for dimensions not shown on structural drawings.
- Provide double joists under all partitions which run parallel with joists.
- All dimensional lumber to be surfaced dry and used at 19% maximum moisture content or less.
- All members exposed to the weather, or in contact with masonry or concrete, shall be pressure-treated. See structural drawings for additional notes and requirements.
- See architectural drawings for all fire blocking, draft stopping, and other miscellaneous blocking requirements.
- Bolts connecting wood members shall be ASTM A307 common steel bolts of a diameter shown on the structural drawings. Common washers shall be used under each bolt head and nut. Bolt holes shall be carefully centered and drilled not more than 1/16" larger than the bolt diameters.
- All wood framing shall be continuous unless otherwise indicated. All splices shall be only as shown on plans.
- Connection details shown are typical unless otherwise noted or submitted.
- Wood bearing under wood beams shall be solid and bearing parallel to grain, continuous through floors from beam bearing to concrete slab.
- Interior stud walls bearing on concrete slabs may be anchored by powder actuated fasteners at 24" on center (max).
- Fasteners for preservative treated and fire retardant-treated wood shall be hot-dipped zinc coated galvanized steel, stainless steel, silicon bronze, or copper per IRC 2304.10.5.

EXISTING WOOD:

- Existing wood components are to remain in place, except as shown on demolition plans for new openings. Existing rotted, banded, cracked, or deteriorated wood members shall be reinforced or replaced in the field as conditions require. Contractor shall notify engineer of questionable members discovered not noted on plans for further direction.
- Existing wood members shall be properly cleaned and painted for protection or finishes as called for on architectural plans.
- Existing wood materials shall be investigated for proper wood density and/or possible presence of termite tunnels as necessary. Termite activity shall be reviewed by a professional wood borne insect expert and steps taken to ensure active infestation is not present. Damage to wood fibers and loss of density and wood cross-section shall require reinforcement or replacement of compromised member.
- Deteriorated, out-of-plumb, cracked, or damaged columns shall be replaced/repaired as required.
- Corroded or broken bolts, screws, nails, and/or metal connectors shall be brought to the attention of the structural engineer where not noted on plans for connection retrofit details.
- Rotted or softened bearing ends of wood joists and/or beams in masonry walls shall be reinforced with ledgers, splices, or member replacement as shown on structural drawings. Bring to the attention of the structural engineer any questionable bearing conditions not noted on the plans.
- New steel plates, angles, bars, or other reinforcing elements shall be in accordance with steel material specifications given above. Steel components exposed to weather or in contact with pressure-treated lumber shall be galvanized or stainless.
- Typical repair details and notes shall be applied to the full extent of all damaged existing wood members. General contractor shall coordinate with repair of full extent of repair work.
- Framing subcontractor chosen for repair and rehabilitation of historic wood construction shall be experienced in the materials and methods of historic timber work.

SYMBOL LEGEND

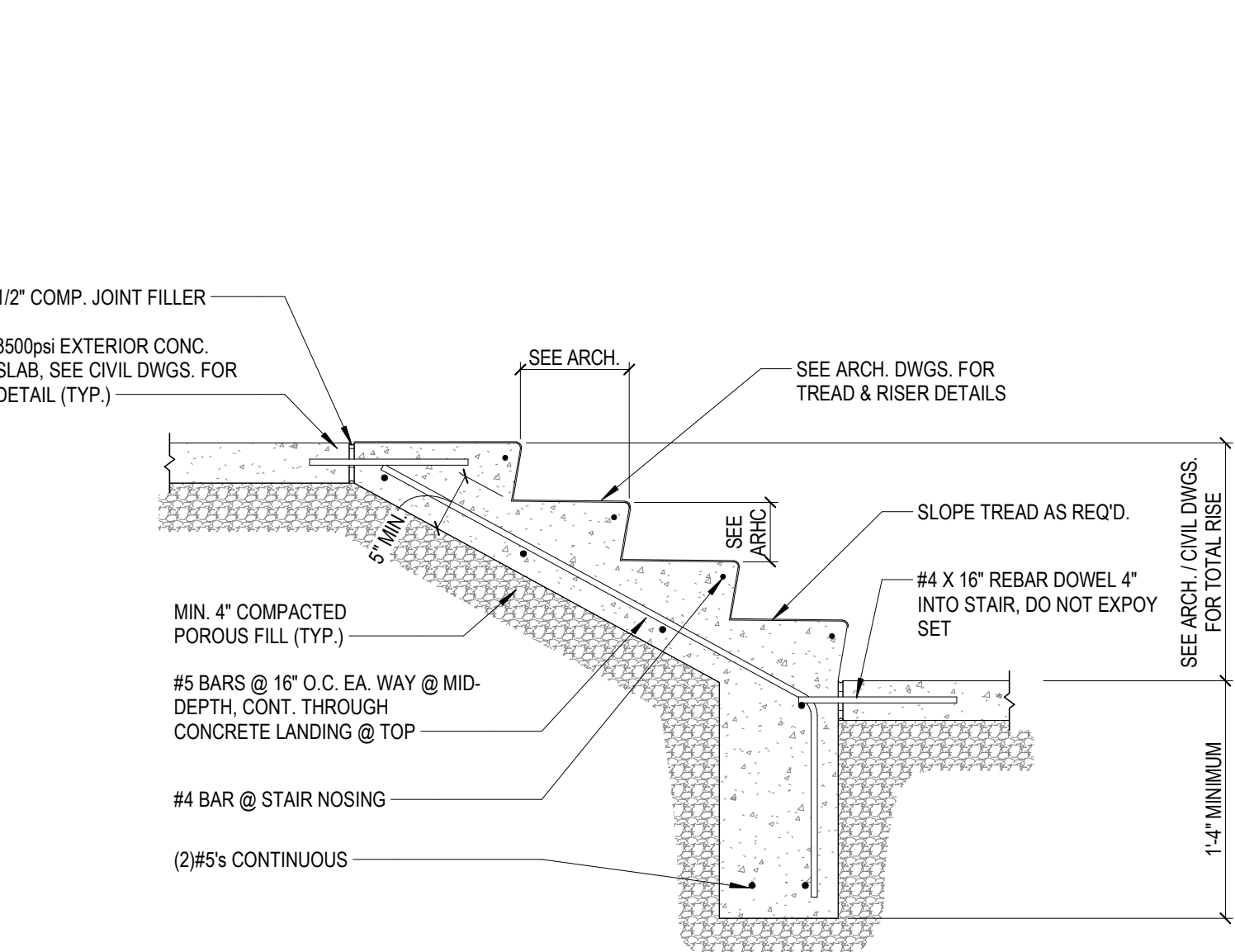
| | |
|--|--|
| | GRID LINE MARK |
| | COLUMN MARK |
| | SPREAD FOOTING MARK |
| | CONTINUOUS WALL FOOTING MARK |
| | GRADE BEAM MARK |
| | PIER MARK |
| | BEAM MARK |
| | LINTEL MARK |
| | SLAB JOINT |
| | CONSTRUCTION JOINT |
| | ELEVATION |
| | STEEL MOMENT CONNECTION |
| | REVISION CLOUD |
| | REVISION TAG |
| | DETAIL SECTION |
| | DETAIL CALLOUT |
| | LETTER/NUMBER COMBINATION INDICATES ELEVATION OR DETAIL |
| | SHEET NUMBER WHERE ELEVATION, SECTION OR DETAIL IS DRAWN |

DIVISION 5 - STRUCTURAL STEEL:

- Structural steel shall be in accordance with the following specifications:
 - Wide flange shapes: ASTM A992 (fy = 50 ksi)
 - Angles, channels, plates, bars, misc. shapes: ASTM A36 (fy = 36 ksi)
 - Pipes columns: ASTM A500, Grade C (fy = 50 ksi)
 - Square rectangular tubing: ASTM A106 (fy = 50 ksi)
 - High strength bolts: ASTM A325 or A490 as specified
 - ASTM A563 nuts
 - ASTM F436 hardened washers or
 - ASTM F959 tension-indicating washers
 - Common (non-high strength) bolts: ASTM A307 Grade A
 - Threaded rod: ASTM A36 (or proprietary rods as specified)
 - Shear headed studs: ASTM A108
 - Inch rods: ASTM F1554 Grade 36 or Grade 55 weldable
 - Welding electrodes: Fexx = 70 ksi
 - Power driven fasteners: Hilti X-L 0.157"x2" or equal
 - Self driving screws: Hilti S-MD, Simpson Strong Drive XM, or Tek
- Structural steel work and erection shall be in accordance with the 2021 International Building Code, 14th Edition AISC 360 "Manual of Steel Construction", and AISC "Code of Standard Practice", including the "Commentary" and supplements.
- Shop drawings are required for structural steel and steel joists and decking. Shop drawings shall be furnished by the Fabricator to the General Contractor. Contractor shall review and approve shop drawings prior to submitting to Architect/Engineer. All structural steel shop drawings shall be prepared under the direct supervision of professional engineer registered in the Commonwealth of Virginia.
- Structural steel shall be new, clean and straight.
- Cuts, holes, copings, etc. in structural steel members required by work of other trades shall be made in the shop and shall be shown on the shop drawings. Burning of holes or cuts in structural steel members in the field will not be permitted without specific approval of the engineer.
- All structural steel exposed to elements shall be galvanized or receive one shop coat of an approved rust-inhibitive primer. Reference architectural drawings for additional paint and finish requirements on exposed steel members.
- Refer to architectural drawings for intumescent paint, spray-on fireproofing, or other special coatings.
- Existing steel members shall be properly cleaned and painted for protection.
- Preparation of steel and application of coatings shall be in accordance with the specifications of the Society for Protective Coatings (SSPC).
- All shop connections shall be welded and all field connections shall be bolted using high strength bolts unless otherwise noted. All high strength bolt diameters shall be as called out on plans. All bolted connections designed to be installed to a snug-tight condition in standard holes unless otherwise noted.
- Provide hardened washers for all bolted connections at all high strength bolted connections.
- All steel in contact with pressure treated lumber or exposed to weather shall be in minimum galvanized with a G185 coating. When galvanized steel is welded provide appropriate ventilation measures. Welded surfaces shall be ground smooth and coated with galvanizing repair paint.
- Stainless steel shall be used for all exposed steel in coastal areas and other locations subject to salt water, including atmospheric water vapor and spray from de-icing salts.
- All welding shall be in accordance with AWS D1.1010, Structural Welding Code. Welds to be approved by a welding inspection agency. All shop and field welding shall be performed by qualified welders in accordance with AWS D1.1.
- Field welded surfaces shall be cleaned, ground smooth, and coated with appropriate primer/paint as specified.
- Supporting columns or struts and beams bearing on columns shall be provided with stiffeners unless otherwise noted. All high strength bolt diameters shall be as called out on plans. All bolted connections designed to be installed to a snug-tight condition in standard holes unless otherwise noted.
- Connections for hung lintels and other members requiring adjustment shall be provided with shims or slotted holes, as required for proper final installation.
- Unless otherwise noted, all bolted connections shall be bearing type, non-slip-critical, tightened to a "snug-tight condition" as defined by AISC.
- All true connections shall be shop welded and shall be designed for the factored/unfactored forces shown on the contract drawings, but not less than 50% of the effective strength of the member. Shop drawings shall clearly show weld sizes and lengths for all connections. Provide gusset plates as required to obtain sufficient weld length. Gusset plate thickness shall match web thickness of chord.
- Bolting in combination with welds shall not be considered as sharing the stress. Welds shall be provided for the entire length of the connection for which the connection is designed.
- The frame of the steel skeleton shall be carried up true and plumb and temporary bolting and bracing shall be left in place as long as may be required for safety. No bolting or welding shall be done until as much of the structure as will be stiffened thereby has been properly aligned.
- The owner shall retain the services of a qualified inspector to inspect erected steel and connections.
- All powder actuated fasteners to be used in structural steel shall be as listed with a minimum length sufficient to fully penetrate base member thickness (not less than 5/8").
- Provide 12 gauge galvanized girts/ply masonry anchoring system by Hohmann & Barnard, Inc., or equal, vertically on all steel column flanges and webs and horizontally on all beam webs, abutted with or encased in masonry. See "Typical Masonry Anchoring System Details".
- See architectural drawings for steel plate and grate flooring specifications and details. Steel grating shall be manufactured in accordance with the Metal Bar Grating Manual, as published by the National Association of Architectural Metals Manufacturers and shall conform to Federal Specification RR-G-661E, Type I, Class I. Steel for grating shall conform to ASTM A569. Perpendicular welded cross bars to be spaced 4" on center. Star tread grating shall be same type. Band exposed edges, unless noted otherwise. Grating and fasteners shall be not dipped galvanized or not less than 5/8".

EXISTING STEEL:

- Existing steel components are to remain in place, except as shown on demolition plans for new openings. Existing corroded, bent, or deteriorated steel members shall be reinforced or replaced in the field as conditions require. Contractor shall notify engineer of questionable members discovered not noted on plans for further direction.
- Existing steel members shall be properly cleaned and painted for protection.
- Existing steel materials shall be investigated for suitability for welding. Cast iron or other non-weldable metals shall be brought to the attention of the structural engineer for alternate repair or replacement details.
- Deteriorated, out-of-plumb, cracked, or damaged columns shall be replaced/repaired as required.
- Corroded or broken bolts and rivets shall be brought to the attention of the structural engineer where not noted on plans for connection retrofit details.
- Sandblast or wire brush surface rust from existing steel members. Any section loss >1/8" in thickness shall be brought to the attention of the structural engineer.
- New steel plates, angles, bars, or other reinforcing elements shall be in accordance with material specifications given above.
- Typical repair details and notes shall be applied to the full extent of all damaged existing steel members. General contractor shall coordinate with steel erector for full extent of repair work.
- Steel erector chosen for repair and rehabilitation of existing metal construction shall be experienced in the materials and methods of historic metal work.



TYPICAL STAIR ON GRADE

3/4" = 1'-0"

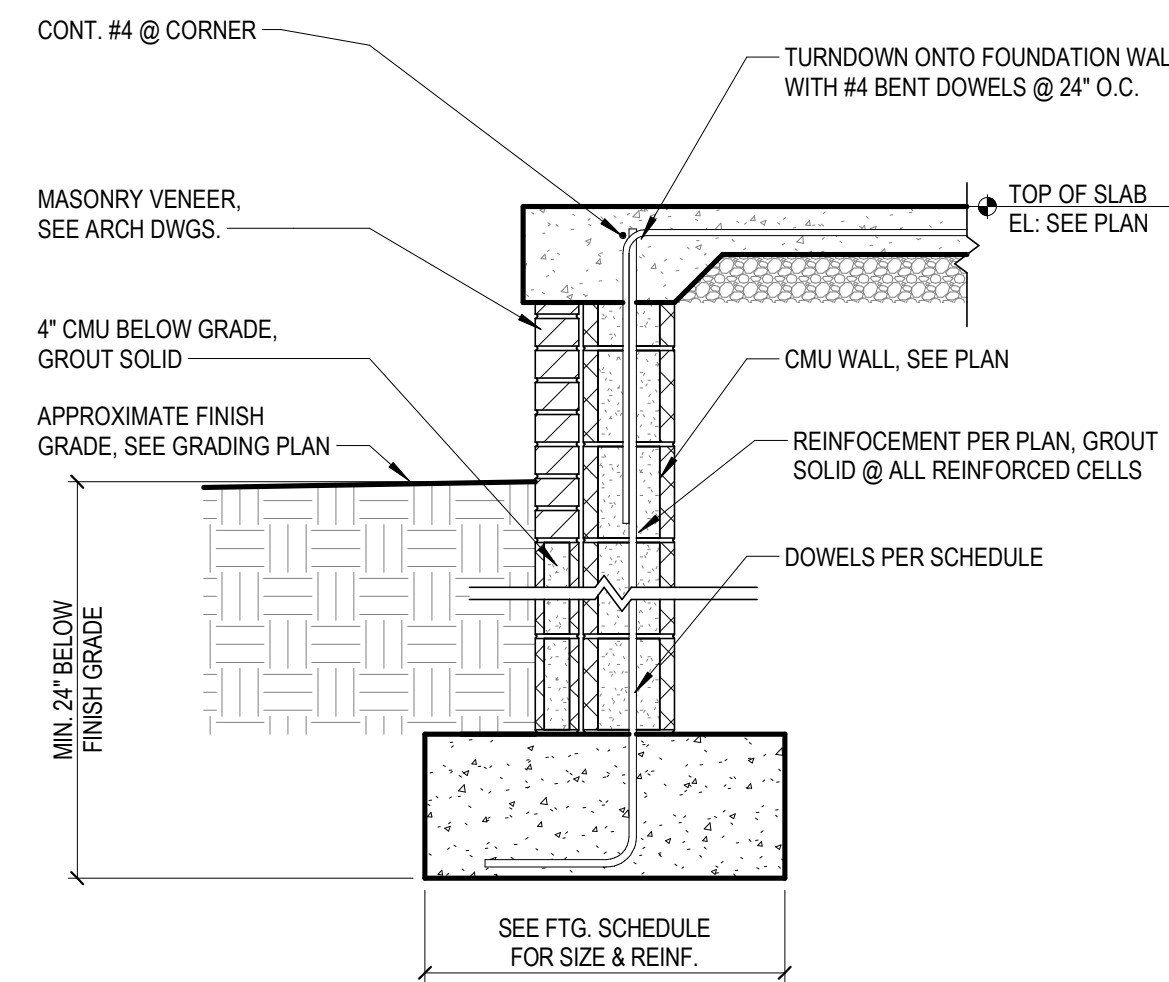
BALZER & ASSOCIATES
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS
Roanoke / Richmond
New River Valley
Shenandoah Valley
www.balzer.cc
80 Coilege Street
Suite H
Christiansburg, VA 24073
540.381.4290

CCCC PHASE 2
HISTORIC RENOVATION
GENERAL STRUCTURAL NOTES

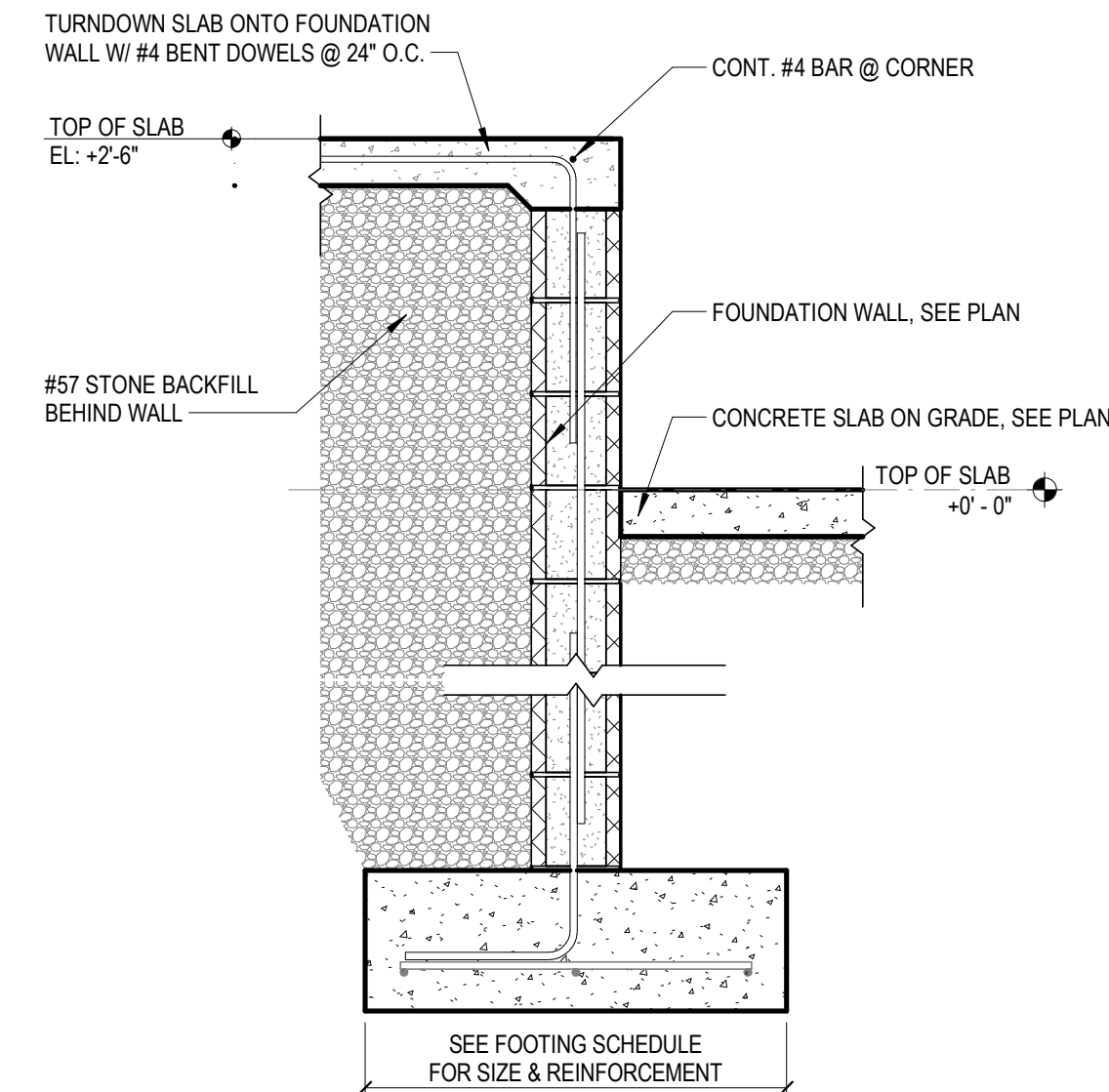
| | |
|-------------|--------------|
| DRAWN BY | MJF |
| DESIGNED BY | MJF |
| CHECKED BY | RWT |
| DATE | 04/22/2025 |
| SCALE | As Indicated |
| REVISIONS | |



COMMONWEALTH OF VIRGINIA
Michael J. Fitzgerald
 MICHAEL J. FITZGERALD
 Lic. No. 051534
 04/22/2025
 PROFESSIONAL ENGINEER

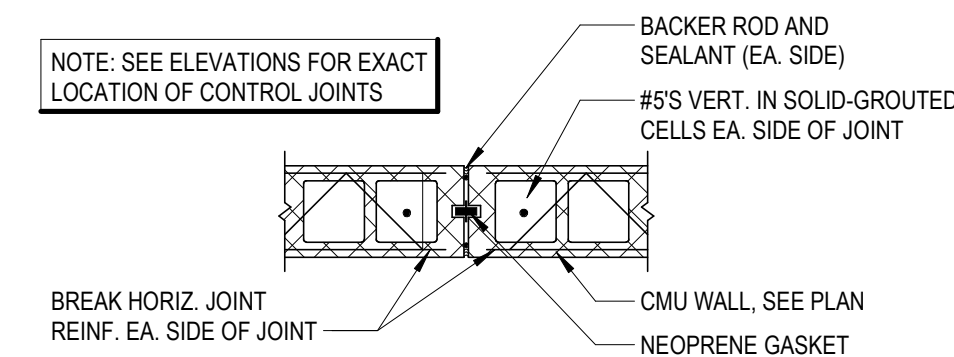


1
S2.01



3
S2.01 **3/4" = 1'-0"**

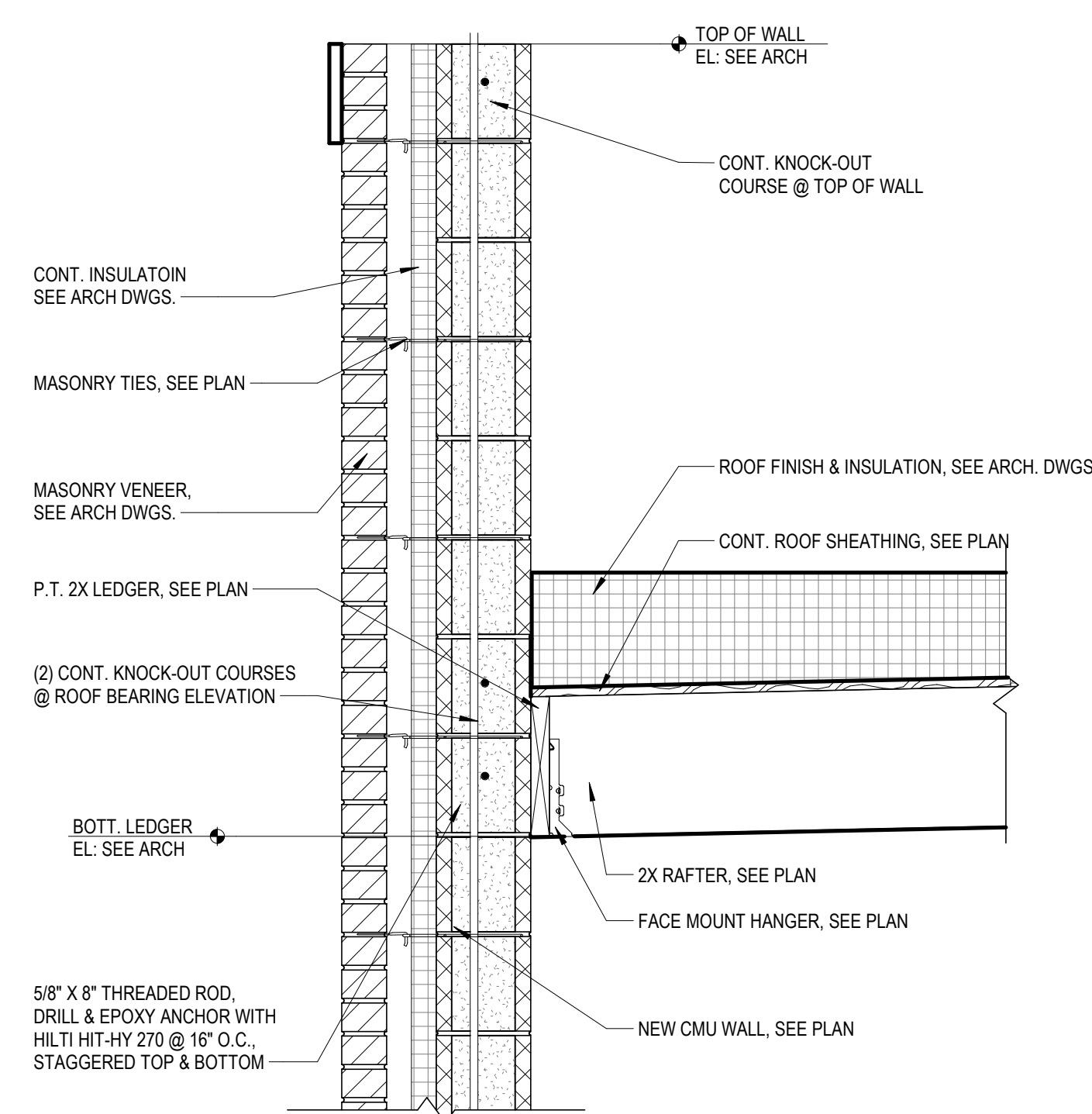
4
S2.01



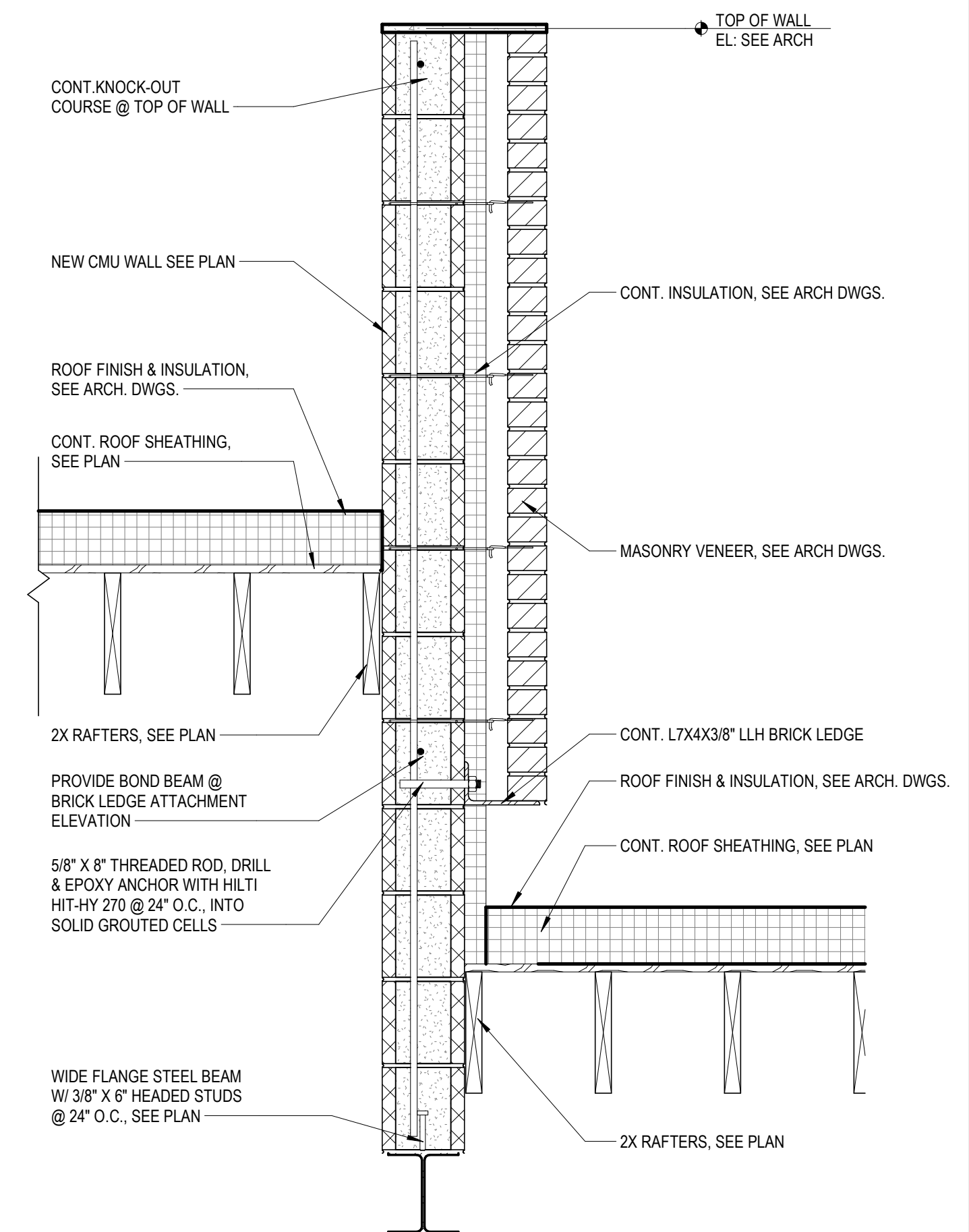
**END OF WALL &
DOOR/WINDOW JAMBS**

TYP. CMU WALL DETAILS

3/4" = 1'-0'



CMU
1" = 1'-0"



7
S2.01

CCCC PHASE 2

HISTORIC RENOVATION

STRUCTURAL DETAILS

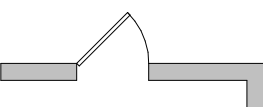
| | |
|------------|--------------|
| AWN BY | MJF |
| SIGNED BY | MJF |
| CHECKED BY | RWT |
| DATE | 04/22/2025 |
| SCALE | As indicated |
| REVISIONS | |

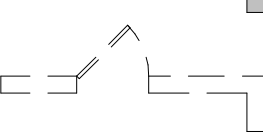
S2.01

| DEMOLITION SHEET KEY NOTES | |
|----------------------------|---|
| D01 | REMOVE WALL (OR PORTION OF) AS REQ'D PER PLANS |
| D02 | REMOVE FURRING WALL (OR PORTION OF) AS REQ'D PER PLANS; ORIGINAL HISTORIC WALLS TO REMAIN |
| D03 | REMOVE PORTION OF WALL FOR NEW DOOR/WINDOW/OPENING PER PLANS, SEE STRUCTURAL FOR NEW SUPPORT REQUIREMENTS |
| D04 | REMOVE DOOR/WINDOW & PORTION OF WALL PER PLANS, |
| D05 | REMOVE WINDOW/DOOR/FRAME/HARDWARE; ENCLOSE OPENING, MATCH EXISTING ADJACENT |
| D06 | REMOVE WINDOW/DOOR/FRAME/HARDWARE; PREP OPENING FOR NEW DOOR/WINDOW/OPENING |
| D07 | REMOVE EXISTING GLAZING/PLEXI GLASS; REPAIR FRAME AND PROVIDE NEW GLAZING |
| D08 | REMOVE/REFINISH & REINSTALL EXISTING DOOR |
| D09 | REMOVE STRUCTURAL STEEL COLUMNS AND BEAMS ABOVE |
| D10 | REMOVE FLOOR SYSTEM |
| D11 | REMOVE LIFT, SHAFT, AND CONTROLS |
| D12 | REMOVE PORTION OF FLOORING TO EXPOSE ORIGINAL STAIR BELOW (ASSUMED TO BE IN PLACE), STAIR TO REMAIN, SEE PLAN |
| D13 | REMOVE STAIRS/RAMP/STOOP/RAILING/ETC. |
| D14 | EXISTING CRAWLSPACE ACCESS, RELOCATE/ENLARGE AS REQ'D PER PLANS |
| D15 | REMOVE PORTION OF FLOOR FOR NEW CRAWLSPACE ACCESS, SEE PLANS |
| D16 | REMOVE ROOF/JAWNING FRAMING |
| D17 | REMOVE MECHANICAL/ELECTRICAL EQUIPMENT |
| D18 | REMOVE PLUMBING FIXTURE, CAP AND/OR REMOVE PIPE TO SOURCE |
| D19 | REMOVE TOILET PARTITION AND ACCESSORIES |
| D20 | REMOVE CONCRETE PAD |
| D21 | REMOVE GUTTER AND DOWNSPOUT, TYP. |
| D22 | REPAIR OR REPLACE WOOD TRIM & FASCIA, TYP. |
| D23 | REMOVE EXISTING STANDING SEAM ROOF; PREPARE SURFACE FOR NEW ROOFING PER PLANS |
| D24 | INFILL CRAWL SPACE VENT OPENING; EXISTING CRAWL SPACE VENT TO BE REFINISHED AND REINSTALLED AT OPENING |
| D25 | EXISTING CRAWL SPACE VENT TO BE REFINISHED AND REINSTALLED AT OPENING |
| D26 | INFILL CRAWL SPACE VENT OPENING; MATCH EXISTING ADJACENT |
| D27 | REMOVE EXISTING EXTERIOR WALL PANELS; DOOR, EXTERIOR TRIM, ETC. MODIFY AS REQUIRED FOR NEW OPEN AIR PAVILION, SEE STRUCTURAL DRAWINGS |
| D28 | EXISTING CHIMNEY TO REMAIN; NO CHANGE |
| D29 | EXISTING HISTORIC TURBINES/VENTS TO REMAIN; REFINISH/REPAIR AS REQ.; SEE MECHANICAL DRAWINGS FOR SELECTIVE USE OF VENTS |
| D30 | REMOVE EXISTING CASEWORK/APPLIANCE; PREP FOR NEW APPLIANCE/CASEWORK, SEE PLANS |
| D31 | REMOVE EXISTING CASEWORK/APPLIANCE; STORE FOR FUTURE RE-USE; PREP FOR NEW APPLIANCE/CASEWORK, SEE PLANS |
| D32 | REMOVE EXISTING INTERIOR GWB RETURN AND FRAMING AS REQ. FOR NEW WINDOW/DOOR INSTALLATION |

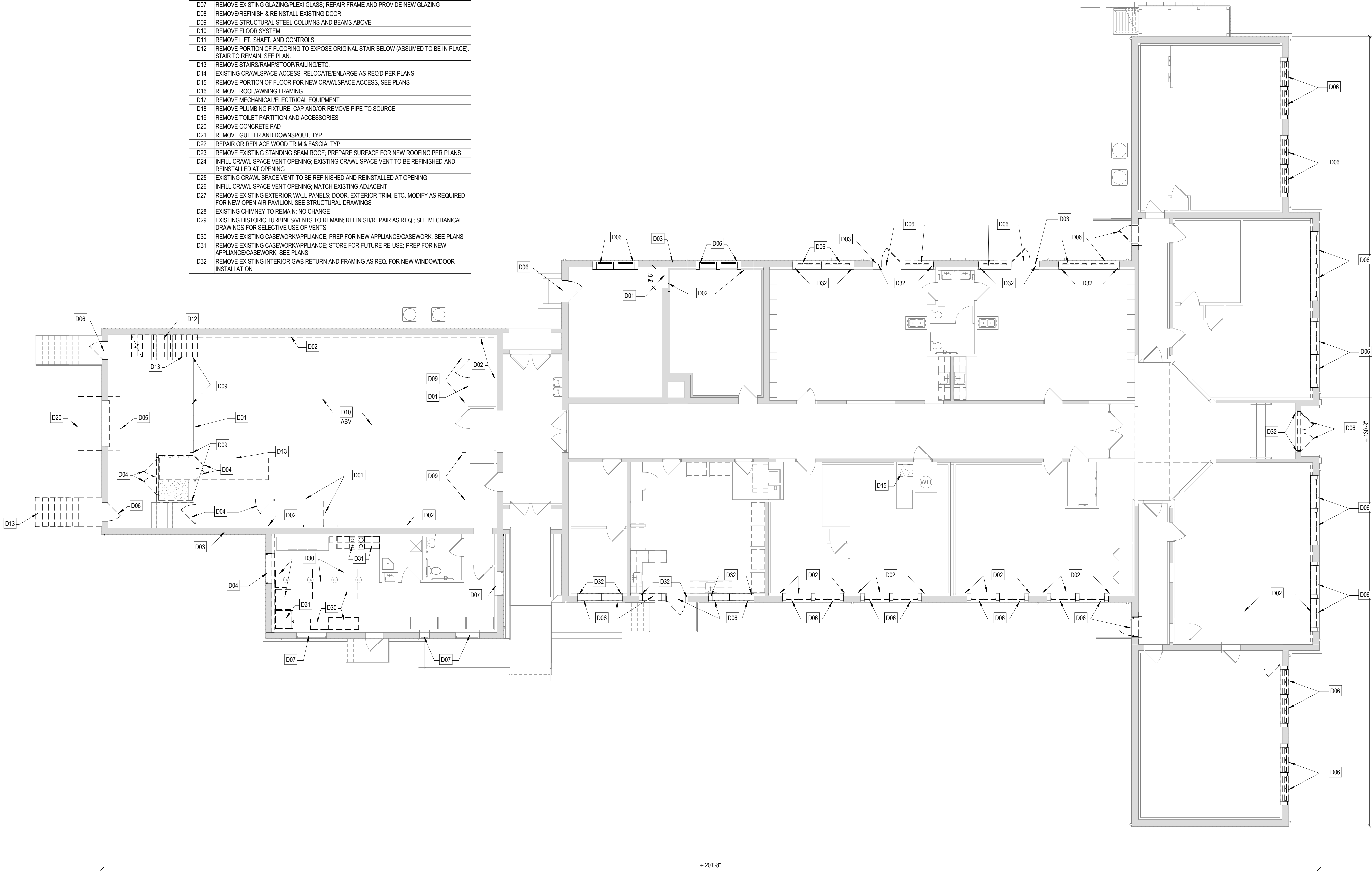
NOTE: NO DEMO OF EXISTING FLOOR COVERINGS BY G.C. (WORK TO BE PERFORMED BY OWNER).
REMOVAL OF ALL TRASH, DEBRIS, AND LOOSE ITEMS (FURNITURE, ETC.) FROM BUILDING BY OWNER.

DEMO SHEET PHASE LEGEND

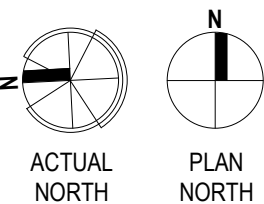
- 

EXISTING WALLS AND DOORS TO REMAIN
WALLS SHOWN SOLID GREY, DOORS AT 45° ANGLE
- 

EXISTING WALLS AND DOORS TO BE REMOVED
ALL ELEMENTS OR PORTIONS OF ELEMENTS SHOWN DASHED



1
D1.01
DEMOLITION FLOOR PLAN
1/8" = 1'-0"



**BALZER
& ASSOCIATES**
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

Roanoke / Richmond
New River Valley
Shenandoah Valley
www.balzer.cc
80 College Street, Suite H
Christiansburg, VA 24073
540.381.4290



CALFEE CCC PHASE 2
HISTORIC RENOVATION
DEMOLITION FLOOR PLAN & NOTES

1 CORBIN-HARMON DRIVE
FOLKLAND, VIRGINIA 24051

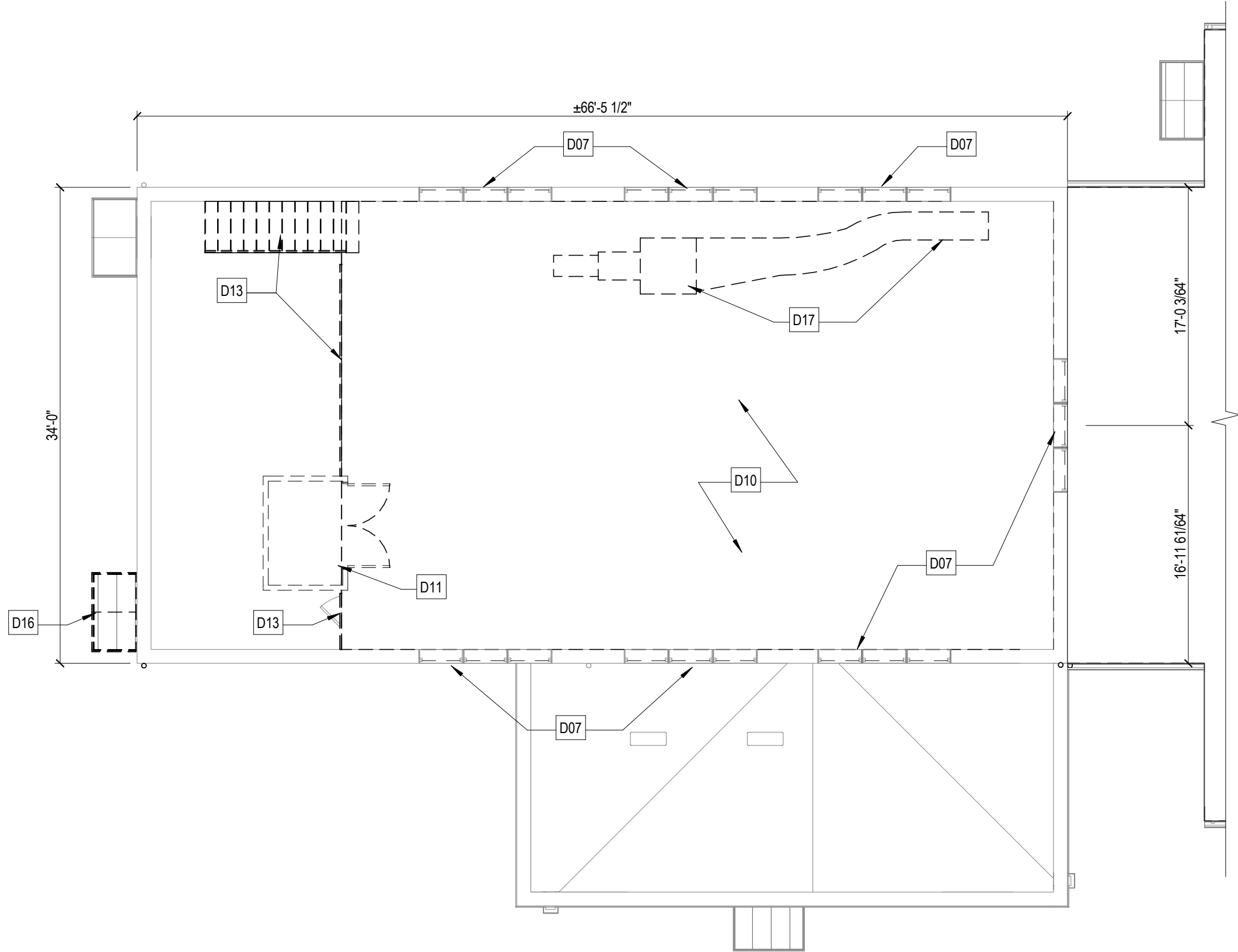
DRAWN BY **ARW/LMC/STC**
DESIGNED BY **ARW**
CHECKED BY **ARW**
DATE **04/22/2025**
SCALE **As indicated**
REVISIONS

D1.01
PROJECT NO 23220008.00

2
D1.02

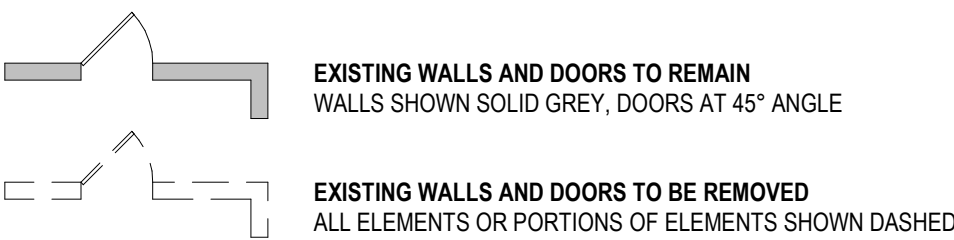
EXISTING LOFT DEMOLITION PLAN

1/8" = 1'-0"



| DEMOLITION SHEET KEY NOTES | |
|----------------------------|---|
| D01 | REMOVE WALL (OR PORTION OF) AS REQ'D PER PLANS |
| D02 | REMOVE FURRING WALL (OR PORTION OF) AS REQ'D PER PLANS; ORIGINAL HISTORIC WALLS TO REMAIN |
| D03 | REMOVE PORTION OF WALL FOR NEW DOOR/WINDOW/OPENING PER PLANS, SEE STRUCTURAL FOR NEW SUPPORT REQUIREMENTS |
| D04 | REMOVE DOOR/WINDOW & PORTION OF WALL PER PLANS. |
| D05 | REMOVE WINDOW/DOOR/FRAME/HARDWARE: ENCLOSE OPENING, MATCH EXISTING ADJACENT |
| D06 | REMOVE WINDOW/DOOR/FRAME/HARDWARE: PREP OPENING FOR NEW DOOR/WINDOW/OPENING |
| D07 | REMOVE EXISTING GLAZING/PLEXI GLASS; REPAIR FRAME AND PROVIDE NEW GLAZING |
| D08 | REMOVE/REFINISH & REINSTALL EXISTING DOOR |
| D09 | REMOVE STRUCTURAL STEEL COLUMNS AND BEAMS ABOVE |
| D10 | REMOVE FLOOR SYSTEM |
| D11 | REMOVE LIFT, SHAFT, AND CONTROLS |
| D12 | REMOVE PORTION OF FLOORING TO EXPOSE ORIGINAL STAIR BELOW (ASSUMED TO BE IN PLACE), STAIR TO REMAIN, SEE PLAN. |
| D13 | REMOVE STAIRS/RAMP/STOOP/RAILING/ETC. |
| D14 | EXISTING CRAWLSPACE ACCESS, RELOCATE/ENLARGE AS REQ'D PER PLANS |
| D15 | REMOVE PORTION OF FLOOR FOR NEW CRAWLSPACE ACCESS, SEE PLANS |
| D16 | REMOVE ROOF/AWNING FRAMING |
| D17 | REMOVE MECHANICAL/ELECTRICAL EQUIPMENT |
| D18 | REMOVE PLUMBING FIXTURE, CAP AND/OR REMOVE PIPE TO SOURCE |
| D19 | REMOVE TOILET PARTITION AND ACCESSORIES |
| D20 | REMOVE CONCRETE PAD |
| D21 | REMOVE GUTTER AND DOWNSPOUT, TYP. |
| D22 | REPAIR OR REPLACE WOOD TRIM & FASCIA, TYP |
| D23 | REMOVE EXISTING STANDING SEAM ROOF; PREPARE SURFACE FOR NEW ROOFING PER PLANS |
| D24 | INFILL CRAWL SPACE VENT OPENING; EXISTING CRAWL SPACE VENT TO BE REFINISHED AND REINSTALLED AT OPENING |
| D25 | EXISTING CRAWL SPACE VENT TO BE REFINISHED AND REINSTALLED AT OPENING |
| D26 | INFILL CRAWL SPACE VENT OPENING; MATCH EXISTING ADJACENT |
| D27 | REMOVE EXISTING EXTERIOR WALL PANELS; DOOR, EXTERIOR TRIM, ETC. MODIFY AS REQUIRED FOR NEW OPEN AIR PAVILION; SEE STRUCTURAL DRAWINGS |
| D28 | EXISTING CHIMNEY TO REMAIN; NO CHANGE |
| D29 | EXISTING HISTORIC TURBINES/VENTS TO REMAIN; REFINISH/REPAIR AS REQ.; SEE MECHANICAL DRAWINGS FOR SELECTIVE USE OF VENTS |
| D30 | REMOVE EXISTING CASEWORK/APPLIANCE; PREP FOR NEW APPLIANCE/CASEWORK, SEE PLANS |
| D31 | REMOVE EXISTING CASEWORK/APPLIANCE; STORE FOR FUTURE RE-USE; PREP FOR NEW APPLIANCE/CASEWORK, SEE PLANS |
| D32 | REMOVE EXISTING INTERIOR GWB RETURN AND FRAMING AS REQ. FOR NEW WINDOW/DOOR INSTALLATION |

DEMO SHEET PHASE LEGEND



GENERAL DEMOLITION NOTES

- DRAWINGS OF EXISTING CONDITIONS HAVE BEEN COMPILED FROM EXISTING DATA SUPPLIED BY THE OWNER AND BASED ON FIELD INVESTIGATIONS. THE ARCHITECT MAKES NO WARRANTY EITHER EXPRESSED OR IMPLIED, FOR THE ACCURACY OR COMPLETENESS OF THE EXISTING INFORMATION RECORDED. VERIFY ALL EXISTING CONDITIONS. NOTIFY ARCHITECT OF ANY DISCREPANCIES FOR CLARIFICATION PRIOR TO PROCEEDING WITH WORK.
- MOST DEMO ITEMS HAVE BEEN NOTED ON PLAN. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO DEMOLISH ANY ITEMS NOT NECESSARILY NOTED BUT INTENDED TO BE REMOVED, AND PREPARE EXISTING ITEMS TO REMAIN FOR NEW WORK. PROVIDE ALL NECESSARY BARRICADES AND OTHER FORMS OF PROTECTION AS REQUIRED TO PROTECT THE GENERAL PUBLIC FROM INJURY DUE TO DEMO WORK.
- WHERE ITEMS ARE TO BE REMOVED THE CONTRACTOR SHALL BE CAUTIONED NOT TO DAMAGE ITEMS THAT ARE TO BE RETAINED BY OWNER OR RELOCATED. ALL EXPOSED OR DAMAGED AREAS, AFTER REMOVAL OF ITEMS, SHALL BE REPAIRED.
- DEMOLITION WORK WILL BE GOVERNED BY THE EXTENT OF NEW CONSTRUCTION INVOLVED. CONTRACTOR WILL VERIFY AND COORDINATE DEMOLITION WORK WITH RESPECT TO THE NEW CONSTRUCTION. CONTRACTOR TO VERIFY EXISTING CONDITIONS BEFORE START OF WORK.
- REMOVAL OF EXISTING EQUIPMENT, PIPING, DUCTS, AND SIMILAR UTILITIES SHALL INCLUDE ALL ANCHORS, HANGERS, AND OTHER ACCESSORIES. AFTER REMOVAL, FLOORS, WALLS AND CEILINGS SHALL BE FINISHED TO MATCH ADJOINING SURFACES OR SHALL BE PREPARED TO RECEIVE NEW FINISHES AS INDICATED IN THE NEW FINISH SCHEDULE. MAINTAIN EXISTING FINISHES AS NOTED ON THE NEW FINISH SCHEDULE.
- MATCH THICKNESS OF EXISTING WALL AND CEILING FINISH MATERIAL WHERE PATCHING AND REPAIRING IS REQUIRED.
- COORDINATE DEMOLITION PLANS WITH PLANS FOR NEW CONSTRUCTION FOR EXTENT OF REMOVAL. REMOVE ONLY THOSE PORTIONS OF WALLS AND FLOORS NECESSARY TO ACCOMMODATE NEW CONSTRUCTION. TAKE REASONABLE CARE IN REMOVAL OF ITEMS TO BE RELOCATED AND REUSED.
- CONTRACTOR SHALL CHECK ALL EXISTING CORRIDOR WALLS IN THOSE AREAS OF RENOVATION FOR OPENINGS. ANY OPENINGS SHALL BE CLOSED TIGHT AS REQUIRED, TO MATCH EXISTING CONSTRUCTION AND TO MAINTAIN NEW OR EXISTING WALL RATING. THIS IS TYPICAL FOR ALL WORK DONE IN AREAS WHERE RENOVATION IS BEING DONE.
- ALL WALLS SHOWN BY DASHED LINES ARE TO BE REMOVED COMPLETELY, ALONG WITH DOORS AND FRAMES, ELECTRICAL ITEMS, PLUMBING FIXTURES, CASEWORK, AND SIMILAR INFRASTRUCTURE.
- CONCRETE FLOORS SHALL BE REMOVED FOR INSTALLATION AND CONNECTION OF NEW PLUMBING. PATCH WITH 3,000 PSI CONCRETE.
- SEE LIMITS OF CONSTRUCTION ON NEW FLOOR PLANS. GENERALLY, ROOMS OUTSIDE OF LIMITS OF CONSTRUCTION ARE NOT TO HAVE ANY WORK DONE IN THEM WITH THE EXCEPTION OF FLOOR OR CEILING TO BE PATCHED OR REPAIRED FOR INSTALLATION OF NEW WORK. CONTRACTOR SHALL USE EXISTING FLOOR OR CEILING MATERIAL FOR REPAIR, SALVAGED FROM AREAS WHERE EXISTING MATERIALS ARE REMOVED OR ALL NEW MATERIAL IN A ROOM IF NECESSARY THAT MATCH EXISTING FINISHES.
- ALL EXISTING DIMENSION NOTES ON THIS PLAN ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS PRIOR TO NEW WORK. IF THE CONTRACTOR FINDS ANY DISCREPANCY BETWEEN EXISTING CONDITION AND DRAWING, CONTRACTOR MUST NOTIFY THE ARCHITECT IMMEDIATELY AND REQUEST CLARIFICATION.
- CONTRACTOR MUST REMOVE EXISTING FINISHES AS NECESSARY PRIOR TO INSTALLATION OF NEW FINISHES.
- ALL FLOORS AND WALLS OF EXISTING AREAS THAT WILL BE AFFECTED BY CONSTRUCTION PROCEDURES INCLUDING DEBRIS REMOVAL MUST RECEIVE PROTECTION. DUST BARRIERS MUST BE INSTALLED BETWEEN WORK AREAS, UNDISTURBED AREAS AND OCCUPIED SPACES.
- PROVIDE TEMPORARY SHORING OF EXISTING STRUCTURE ABOVE AS REQUIRED WHERE ANY EXISTING LOAD BEARING ELEMENTS (OR PORTION OF) ARE TO BE REMOVED AS REQUIRED BY FLOOR PLAN; PROVIDE NEW HEADER/STRUCTURE/INFILL PER NEW FLOOR PLAN; REPAIR/PATCH WALLS/FLOOR/CEILING AS REQUIRED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES, INCLUDING BUT NOT LIMITED TO: TEMPORARY/PERMANENT BEAMS AND LINTELS; SHORING OF EXISTING CONSTRUCTION; AND FOR SAFETY PRECAUTIONS AND PROGRAMS AS THEY RELATE TO THE WORK OF THIS PROJECT.
- ALL DEMOLISHED MATERIAL SHALL BE REMOVED FROM SITE UNLESS NOTED OTHERWISE.

HAZARDOUS MATERIALS NOTES

- ANY HAZARDOUS MATERIALS REMOVED (ASBESTOS, OIL, GAS, LEAD-BASE PAINT, OR SIMILAR HAZARDS) SHALL BE COMPLETELY REMOVED FROM WORK AREAS AND DISPOSED OF OFF-SITE. DISPOSAL SHALL BE DONE IN A MANNER COMPLIANT WITH ALL LOCAL, STATE AND FEDERAL LAWS AND ALL GOVERNING BODIES HAVING JURISDICTION.
- A PARTIAL ASBESTOS INSPECTION TITLED "FRONT ONLY" WAS PERFORMED SEPTEMBER 20TH, 2019 BY HDTTECHNICAL, AND ASBESTOS-CONTAINING-MATERIALS (ACMS) WERE FOUND. THE ASBESTOS SURVEY/INSPECTION REPORT IS AVAILABLE FOR GENERAL INFORMATION. THE ACMS SHALL BE REMOVED PRIOR TO ANY OTHER WORK BEING PERFORMED IN THE INDICATED AREAS. THE ABATEMENT CONTRACTOR SHALL MARK UP THE ASBESTOS MANAGEMENT PLAN TO SHOW THE "AS-BUILT" CONDITIONS RESULTING FROM ITS WORK TO INCLUDE AREAS WHERE ASBESTOS WAS ABATED, AREAS WHERE ASBESTOS WAS ENCAPSULATED, AND AREAS WHERE ASBESTOS CONTAINING MATERIALS EXIST BUT WERE LEFT IN PLACE.
- THE OWNER SHALL PROVIDE AN ASBESTOS INSPECTION REPORT FOR THE REMAINDER OF THE BUILDING.
- THE OWNER SHALL PROVIDE A LEAD-BASED PAINT INSPECTION REPORT. IF FOUND, THE LEAD-BASED PAINT SHALL BE REMOVED PRIOR TO ANY OTHER WORK BEING PERFORMED IN THE INDICATED AREAS.

GENERAL HISTORIC DEMOLITION NOTES

- ANY EXPOSED BRICK VENEER ON BUILDING INTERIOR SHALL REMAIN EXPOSED.
 - ANY NON-HISTORIC FINISH OVER EXISTING MASONRY MAY BE REMOVED AT OWNER'S OPTION.
 - ANY HISTORIC FINISH OVER EXISTING MASONRY (HISTORIC METAL WALL PANELS, HISTORIC PLASTER FINISH, OR SIMILAR SYSTEM) SHALL REMAIN.
- GENERAL REPAIR NOTES**
- REPAIR DAMAGES CAUSED TO ADJACENT FACILITIES BY DEMOLITION WORK.
 - REPAIR DRYWALL WHERE CASEWORK AND TRIM ARE REMOVED.
 - MAINTAIN CONTINUITY OF FINISHED SURFACE WITH LIKE QUALITIES AND CONSTRUCTION AND WITH LIKE FINISHES.
 - RESTORE EXPOSED FINISHES OF PATCHED AREAS AND WHERE NECESSARY EXTEND FINISH RESTORATION INTO RETAINED ADJOINING WORK IN A MANNER WHICH WILL ELIMINATE EVIDENCE OF PATCHING AND REFINISHING.
 - DO NOT CUT AND PATCH WORK IN A MANNER THAT WOULD RESULT IN SUBSTANTIAL VISUAL EVIDENCE OF CUT AND PATCH WORK.
 - USE MATERIALS FOR CUTTING AND PATCHING THAT ARE IDENTICAL TO EXISTING MATERIALS.
 - COORDINATE ALL DEMOLITION AND RESTORATION WORK WITH OWNERS. USE MATERIALS FOR PATCHING THAT ARE IDENTICAL TO EXISTING MATERIALS.
 - RESTORE EXPOSED FINISHES OF PATCHED AREAS AND WHERE NECESSARY EXTEND FINISH RESTORATION INTO RETAINED ADJOINING WORK IN A MANNER WHICH WILL ELIMINATE EVIDENCE OF PATCHING AND REFINISHING.

GENERAL DEMOLITION FINISH NOTES

- PATCH AND REPAIR TO MATCH EXISTING CEILINGS, FLOORS, OR WALL FINISHES AFFECTED BY DEMOLITION WORK UNLESS OTHERWISE NOTED ON THE PLANS. NEW WORK TO HAVE SMOOTH AND LEVEL TRANSITION WITH THE EXISTING CONSTRUCTION.
- ALL ABANDONED FLOOR PENETRATIONS SHALL BE PATCHED WITH LIKE MATERIALS AND REPAIRED TO MATCH EXISTING CONSTRUCTION AND TO MAINTAIN FLOOR INTEGRITY.
- ANY ITEMS REMOVED BY CONTRACTOR FROM WALLS TO HAVE THE REMAINING HOLE PATCHED TO MATCH THE EXISTING CONSTRUCTION.
- PROVIDE A SKIM COAT OF GYPSUM PLASTER TO SMOOTH OUT WALL BEFORE INSTALLING NEW WALL BASE OR PAINTING AN EXISTING WALL.
- REPLACE DAMAGED CEILING TILE AND CEILING GRIDS WITH NEW TILE AND GRID TO MATCH EXISTING. PATCH AND REPAIR GYP. BD. CEILINGS AS REQUIRED FOR NEW WORK.

GENERAL SALVAGE NOTES

- SALVAGE AND REUSE AND/OR RECYCLE MATERIALS AS NOTED IN CONSTRUCTION DRAWINGS AND CONTRACTS.
- COORDINATE WITH THE OWNER'S REPRESENTATIVE THE SALVAGE OF LIGHT FIXTURES, FURNISHINGS, DOORS, AND MISCELLANEOUS EQUIPMENT.
- CARE SHALL BE TAKEN IN REMOVAL OF REUSED ITEMS THAT CAN BE RELOCATED. RETURN TO OWNER ALL OTHER ITEMS.
- ALL ITEMS WHICH ARE HUNG ON WALLS TO BE DEMOLISHED (BULLETIN BOARDS, ILLUMINATORS, FIRE EXTINGUISHERS, ETC.) SHALL BE OFFERED TO THE OWNER. ITEMS NOT DESIRED BY THE OWNER SHALL BE REMOVED BY THE GENERAL CONTRACTOR.
- GENERAL CONTRACTOR SHALL COORDINATE WITH OWNER FOR ANY MATERIAL BEING REMOVED THAT ARE TO BE STORED FOR REUSE IN CONSTRUCTION OR FUTURE USE BY OWNER.

GENERAL TEMPORARY WORK NOTES

- LOCATE TEMPORARY WALLS WITH EXIT SIGNS WHERE REQUIRED. DO NOT BLOCK EXISTING FIRE EXITS. THE CONTRACTOR SHALL CONTACT THE OWNER'S REPRESENTATIVE BEFORE ERECTING TEMPORARY PARTITIONS. FOR COORDINATION OF THESE WALLS - REFER TO THE PLANS FOR LOCATIONS OF TEMPORARY WALLS.

GENERAL CONTINUOUS OPERATION NOTES

- ENSURE THAT DEMOLITION WORK DOES NOT INTERFERE WITH OR PROHIBIT THE CONTINUING OCCUPATION OF ADJACENT OPERATIONS WITHIN THE STRUCTURE. THIS INCLUDES BUT IS NOT LIMITED TO THE SELECTIVE DEMOLITION OF PARTITIONS, ELECTRICAL AND MECHANICAL SYSTEMS. INFORM THE OWNER A MINIMUM OF 72 HOURS OF DEMOLITION ACTIVITIES THAT WILL AFFECT NORMAL OPERATION OF THE BUILDING.
- ALL WORK SHALL BE SCHEDULED IN A MANNER TO MAINTAIN THE OWNERS CONTINUOUS USE OF THE BUILDING.

GENERAL FIRE RATING DEMOLITION NOTES

- OPENINGS TO BE CLOSED IN EXISTING FIRE OR SMOKE WALLS SHALL BE PATCHED TO MATCH EXISTING CONSTRUCTION AND TO MAINTAIN THE INTEGRITY OF THE WALL. TYPICAL FOR ALL WORK DONE IN AREAS WHERE NEW WORK IS BEING DONE.

GENERAL STRUCTURAL DEMOLITION NOTES

- THESE DEMOLITION PLAN DRAWINGS ARE INTENDED TO SHOW THE GENERAL CONDITIONS WHICH ARE EXPECTED TO OCCUR. VERIFY ALL CONDITIONS BEFORE PROCEEDING WITH THE DEMOLITION WORK. WHERE DISCREPANCIES INVOLVE STRUCTURAL ITEMS, REPORT SUCH DIFFERENCES AND SECURE INSTRUCTIONS BEFORE PROCEEDING IN THE AFFECTED AREA.
- DEMOLITION ITEMS SHOWN ARE INTENDED TO BE NON-STRUCTURAL ITEMS ONLY. THE GENERAL CONTRACTOR SHALL INSPECT ALL ITEMS TO BE DEMOLISHED PRIOR TO DEMO TO ENSURE ITEMS ARE NOT STRUCTURAL ELEMENTS. NOTIFY ARCHITECT/ENGINEER IMMEDIATELY AND PRIOR TO DEMOLITION FOR ANY ITEMS THAT APPEAR TO BE STRUCTURAL/LOAD-BEARING.
- A PROFESSIONAL ENGINEER SHALL BE CONSULTED IN ALL CASES WHERE CUTTING INTO AN EXISTING STRUCTURAL PORTION OF ANY BUILDING IS EITHER EXPEDIENT OR NECESSARY. PRIOR TO PROCEEDING WITH WORK, PRIOR TO CUTTING INTO STRUCTURAL PORTIONS OF ANY BUILDING SHALL PROVIDE REINFORCEMENT AND/OR SUPPORT SATISFACTORY TO THE PROFESSIONAL ENGINEER.

GENERAL MECHANICAL, ELECTRICAL AND PLUMBING DEMOLITION NOTES

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ARCHITECT AND COORDINATE INSPECTIONS (IF REQUIRED) BY STATE AGENCIES AND MEET ANY APPLICABLE CODE FOR REUSE OF EXISTING PLUMBING FIXTURES, DIFFUSERS AND DUCTWORK.
- REMOVE ALL EXISTING NON-COMPLIANT GROUND-FAULT CIRCUIT INTERRUPTED OUTLETS.
- REMOVE ALL EXISTING BROKEN OR PAINTED OUTLET COVER PLATES.
- AFTER REMOVAL OF PLUMBING FIXTURES, CAP WASTE LINES BELOW FLOOR SLAB AND SUPPLY LINES ABOVE CEILING.
- AT ALL AREAS WHERE MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT IS REMOVED, PROPERLY CAP AND TERMINATE ALL UTILITIES AS REQUIRED BY ALL PREVAILING NATIONAL AND LOCAL CODES.



BALZER & ASSOCIATES
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

Roanoke / Richmond
New River Valley
Shenandoah Valley

www.balzer.cc

80 College Street, Suite H
Christiansburg, VA 24073
540.381.4290

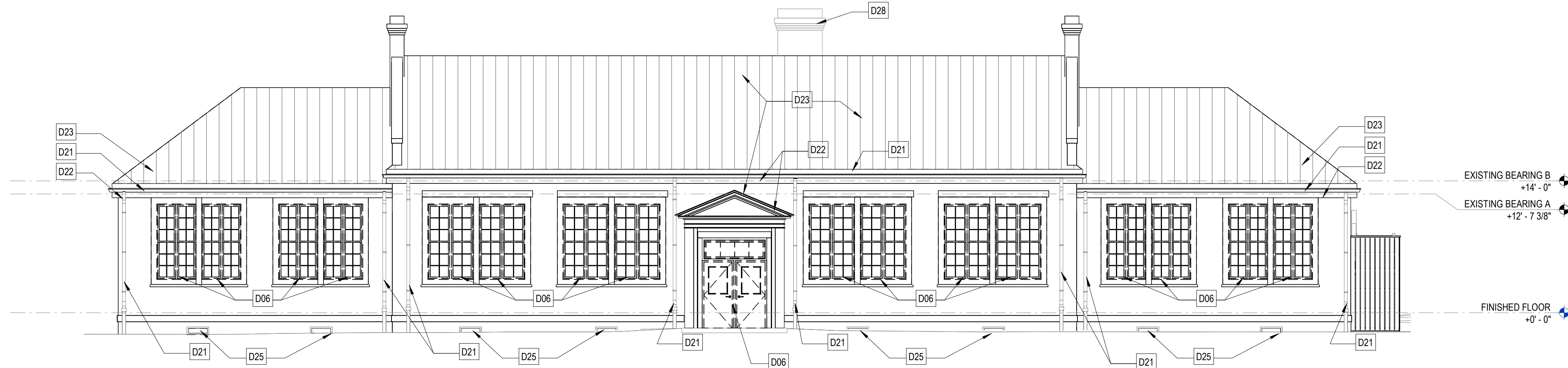


CALFEE CCC PHASE 2
HISTORIC RENOVATION
EXISTING LOFT DEMOLITION PLAN

1 CORBIN-HARMON DRIVE
FOLKLAND, VIRGINIA 24041

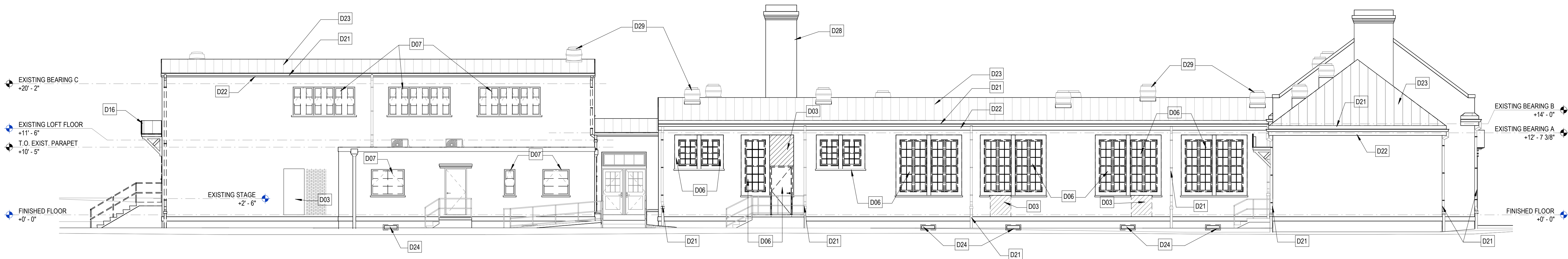
DRAWN BY **ARW/LMC/STC**
DESIGNED BY **ARW**
CHECKED BY **ARW**
DATE **04/22/2025**
SCALE **As indicated**
REVISIONS

D1.02
PROJECT NO 23220008.00



**SOUTH ELEVATION -
DEMOLITION**

1
D2.01
1/8" = 1'-0"



**WEST ELEVATION -
DEMOLITION**

2
D2.01
1/8" = 1'-0"

DEMOLITION SHEET KEY NOTES

| | |
|-----|---|
| D01 | REMOVE WALL (OR PORTION OF) AS REQ'D PER PLANS |
| D02 | REMOVE FURRING WALL (OR PORTION OF) AS REQ'D PER PLANS; ORIGINAL HISTORIC WALLS TO REMAIN |
| D03 | REMOVE PORTION OF WALL FOR NEW DOOR/WINDOW/OPENING PER PLANS, SEE STRUCTURAL FOR NEW SUPPORT REQUIREMENTS |
| D04 | REMOVE DOOR/WINDOW & PORTION OF WALL PER PLANS; |
| D05 | REMOVE WINDOW/DOOR/FRAME/HARDWARE; ENCLOSE OPENING, MATCH EXISTING ADJACENT |
| D06 | REMOVE WINDOW/DOOR/FRAME/HARDWARE; PREP OPENING FOR NEW DOOR/WINDOW/OPENING |
| D07 | REMOVE EXISTING GLAZING/PLEXI GLASS; REPAIR FRAME AND PROVIDE NEW GLAZING |
| D08 | REMOVE/REFINISH & REINSTALL EXISTING DOOR |
| D09 | REMOVE STRUCTURAL STEEL COLUMNS AND BEAMS ABOVE |
| D10 | REMOVE FLOOR SYSTEM |
| D11 | REMOVE LIFT, SHAFT, AND CONTROLS |
| D12 | REMOVE PORTION OF FLOORING TO EXPOSE ORIGINAL STAIR BELOW (ASSUMED TO BE IN PLACE); STAIR TO REMAIN, SEE PLAN. |
| D13 | REMOVE STAIRS/RAMP/STOOP/RAILING/ETC. |
| D14 | EXISTING CRAWLSPACE ACCESS, RELOCATE/ENLARGE AS REQ'D PER PLANS |
| D15 | REMOVE PORTION OF FLOOR FOR NEW CRAWLSPACE ACCESS, SEE PLANS |
| D16 | REMOVE ROOF/AWNING FRAMING |
| D17 | REMOVE MECHANICAL/ELECTRICAL EQUIPMENT |
| D18 | REMOVE PLUMBING FIXTURE, CAP AND/OR REMOVE PIPE TO SOURCE |
| D19 | REMOVE TOILET PARTITION AND ACCESSORIES |
| D20 | REMOVE CONCRETE PAD |
| D21 | REMOVE GUTTER AND DOWNSPOUT, TYP. |
| D22 | REPAIR OR REPLACE WOOD TRIM & FASCIA, TYP |
| D23 | REMOVE EXISTING STANDING SEAM ROOF; PREPARE SURFACE FOR NEW ROOFING PER PLANS |
| D24 | INFILL CRAWL SPACE VENT OPENING; EXISTING CRAWL SPACE VENT TO BE REFINISHED AND REINSTALLED AT OPENING |
| D25 | EXISTING CRAWL SPACE VENT TO BE REFINISHED AND REINSTALLED AT OPENING |
| D26 | INFILL CRAWL SPACE VENT OPENING; MATCH EXISTING ADJACENT |
| D27 | REMOVE EXISTING EXTERIOR WALL PANELS; DOOR, EXTERIOR TRIM, ETC. MODIFY AS REQUIRED FOR NEW OPEN AIR PAVILION; SEE STRUCTURAL DRAWINGS |
| D28 | EXISTING CHIMNEY TO REMAIN; NO CHANGE |
| D29 | EXISTING HISTORIC TURBINES/VENTS TO REMAIN; REFINISH/REPAIR AS REQ.; SEE MECHANICAL DRAWINGS FOR SELECTIVE USE OF VENTS |
| D30 | REMOVE EXISTING CASEWORK/APPLIANCE; PREP FOR NEW APPLIANCE/CASEWORK, SEE PLANS |
| D31 | REMOVE EXISTING CASEWORK/APPLIANCE; STORE FOR FUTURE RE-USE; PREP FOR NEW APPLIANCE/CASEWORK, SEE PLANS |
| D32 | REMOVE EXISTING INTERIOR GWB RETURN AND FRAMING AS REQ. FOR NEW WINDOW/DOOR INSTALLATION |



**BALZER
& ASSOCIATES**

PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

Roanoke / Richmond
New River Valley
Shenandoah Valley

www.balzer.cc

80 College Street, Suite H

Christiansburg, VA 24073

540.381.4290



CALFEE CCC PHASE 2
HISTORIC RENOVATION
DEMOLITION EXISTING ELEVATIONS

DRAWN BY ARW/LMC/STC
DESIGNED BY ARW
CHECKED BY ARW
DATE 04/22/2025
SCALE 1/8" = 1'-0"
REVISIONS

1 CORBIN HARMON DRIVE
FOLKLAND, VIRGINIA 24051

D2.01

PROJECT NO 23220008.00

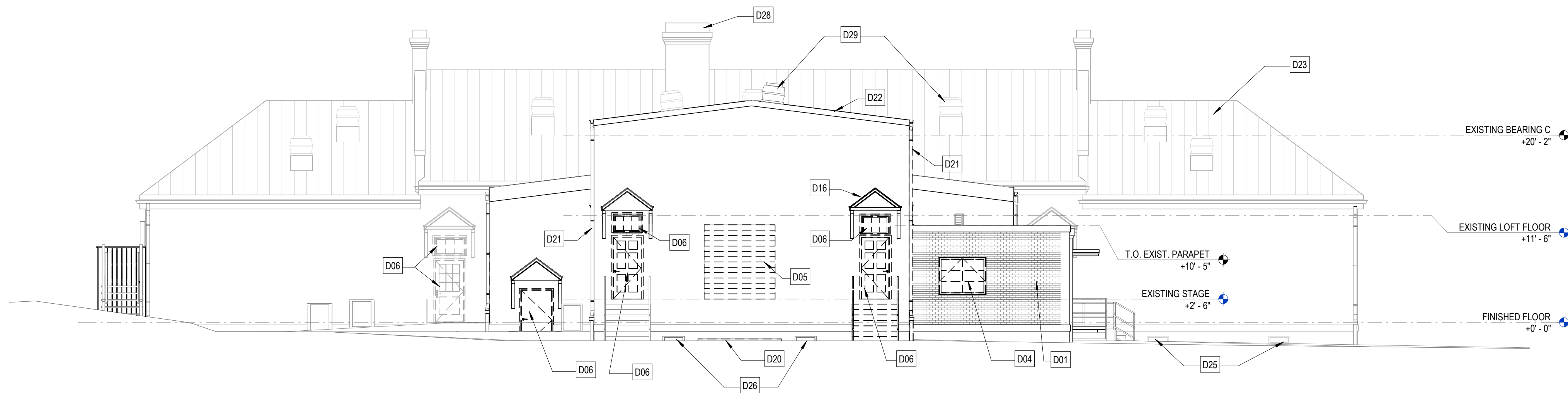


Roanoke / Richmond
New River Valley
Shenandoah Valley

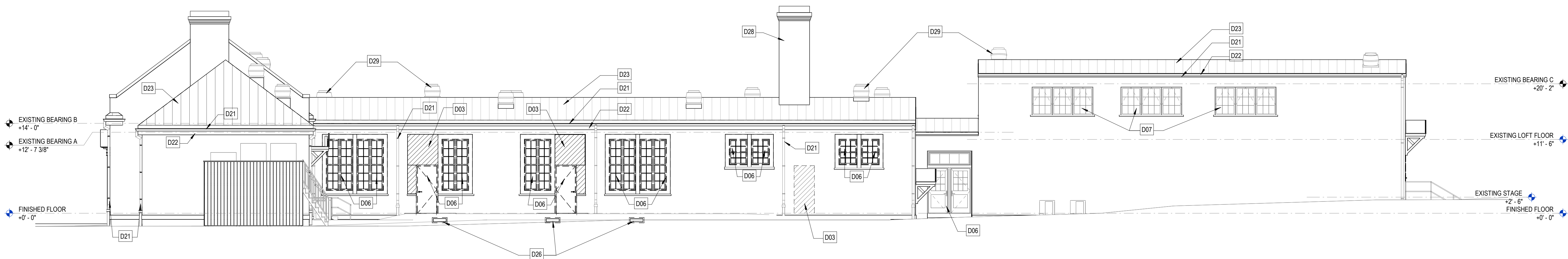
80 College Street, Suite H
Christiansburg, VA 24073



| DEMOLITION SHEET KEY NOTES | |
|----------------------------|---|
| 001 | REMOVE WALL (OR PORTION OF) AS REQ'D PER PLANS |
| 002 | REMOVE FURRING WALL (OR PORTION OF) AS REQ'D PER PLANS; ORIGINAL HISTORIC WALLS TO REMAIN |
| 003 | REMOVE PORTION OF WALL FOR NEW DOOR/WINDOW/OPENING PER PLANS, SEE STRUCTURAL FOR NEW SUPPORT REQUIREMENTS |
| 004 | REMOVE DOOR/WINDOW & PORTION OF WALL PER PLANS, |
| 005 | REMOVE WINDOW/DOOR/FRAME/HARDWARE: ENCLOSE OPENING, MATCH EXISTING ADJACENT |
| 006 | REMOVE WINDOW/DOOR/FRAME/HARDWARE: PREP OPENING FOR NEW DOOR/WINDOW/OPENING |
| 007 | REMOVE EXISTING GLAZING/PLEXI GLASS; REPAIR FRAME AND PROVIDE NEW GLAZING |
| 008 | REMOVE/REFINISH & REINSTALL EXISTING DOOR |
| 009 | REMOVE STRUCTURAL STEEL COLUMNS AND BEAMS ABOVE |
| 010 | REMOVE FLOOR SYSTEM |
| 011 | REMOVE LIFT, SHAFT, AND CONTROLS |
| 012 | REMOVE PORTION OF FLOORING TO EXPOSE ORIGINAL STAIR BELOW (ASSUMED TO BE IN PLACE), STAIR TO REMAIN, SEE PLAN |
| 013 | REMOVE STAIRS/RAMP/STAIR/RAILING/ENCL |
| 014 | EXISTING CRAWLSPACE ACCESS, RELOCATE/ENLARGE AS REQ'D PER PLANS |
| 015 | REMOVE PORTION OF FLOOR FOR NEW CRAWLSPACE ACCESS, SEE PLANS |
| 016 | REMOVE ROOF/AWNING FRAMING |
| 017 | REMOVE MECHANICAL/ELECTRICAL EQUIPMENT |
| 018 | REMOVE PLUMBING FIXTURE, CAP AND/OR REMOVE PIPE TO SOURCE |
| 019 | REMOVE TOILET PARTITION AND ACCESSORIES |
| 020 | REMOVE CONCRETE PAD |
| 021 | REMOVE GUTTER AND DOWNSPOUT, TYP. |
| 022 | REPAIR OR REPLACE WOOD TRIM & FASCIA, TYP |
| 023 | REMOVE EXISTING STANDING SEAM ROOF; PREPARE SURFACE FOR NEW ROOFING PER PLANS |
| 024 | INFILL CRAWL SPACE VENT OPENING; EXISTING CRAWL SPACE VENT TO BE REFINISHED AND REINSTALLED AT OPENING |
| 025 | EXISTING CRAWL SPACE VENT TO BE REFINISHED AND REINSTALLED AT OPENING |
| 026 | INFILL CRAWL SPACE VENT OPENING; MATCH EXISTING ADJACENT |
| 027 | REMOVE EXISTING EXTERIOR WALL PANELS; DOOR, EXTERIOR TRIM, ETC. MODIFY AS REQUIRED FOR NEW OPEN AIR PAVILION. SEE STRUCTURAL DRAWINGS |
| 028 | EXISTING CHIMNEY TO REMAIN; NO CHANGE |
| 029 | EXISTING HISTORIC TURNBUSTES TO REMAIN; REFINISH/REPAIR AS REQ.; SEE MECHANICAL DRAWING FOR SELECTIVE USE OF VENTS |
| 030 | REMOVE EXISTING CASEWORK/APPLIANCE; PREP FOR NEW APPLIANCE/CASEWORK; SEE PLANS |
| 031 | REMOVE EXISTING CASEWORK/APPLIANCE; STORE FOR FUTURE RE-USE; PREP FOR NEW APPLIANCE/CASEWORK; SEE PLANS |
| 032 | REMOVE EXISTING INTERIOR GWB RETURN AND FRAMING AS REQ. FOR NEW WINDOW/DOOR INSTALLATION |



NORTH ELEVATION - DEMOLITION



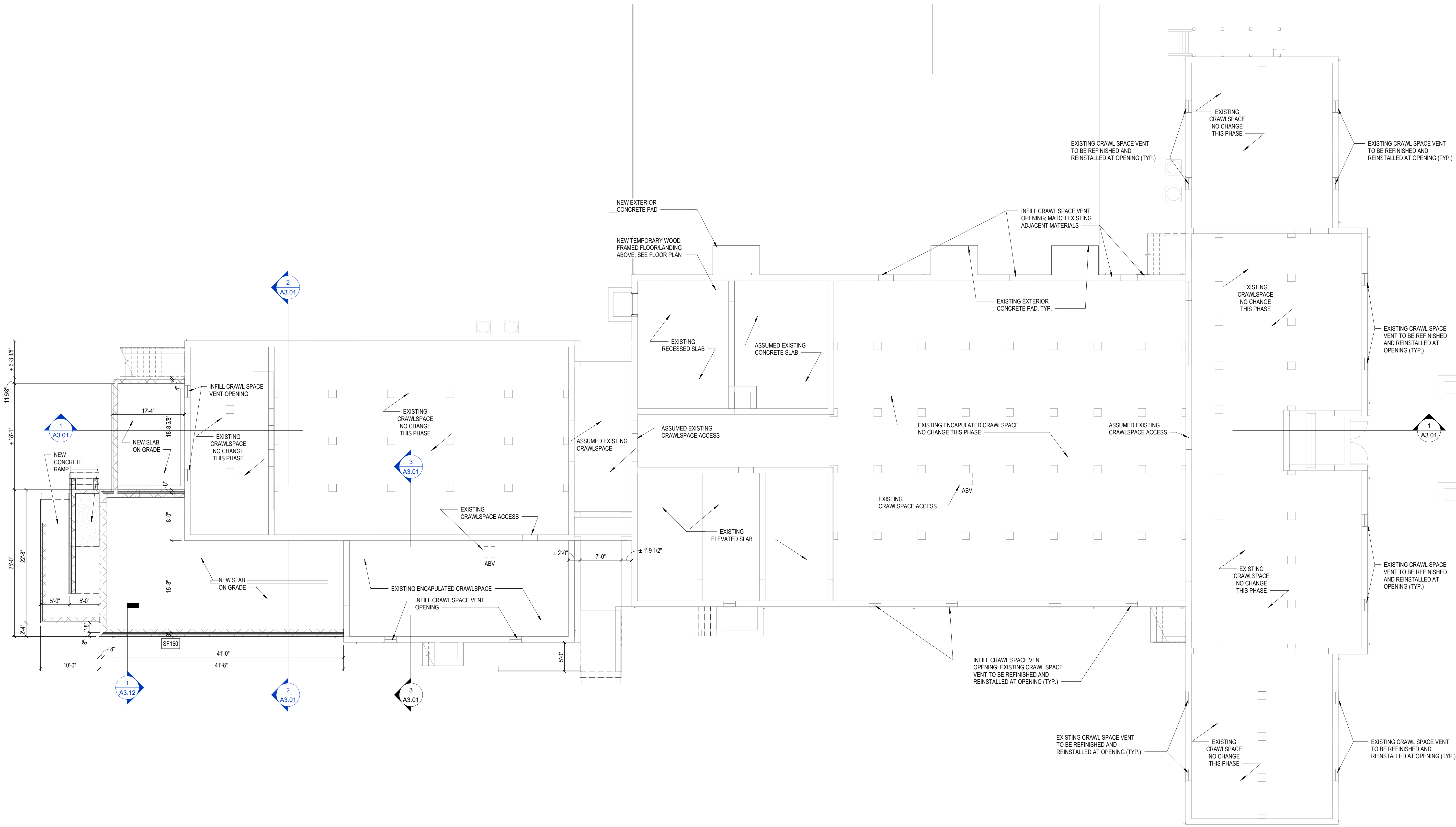
EAST ELEVATION - DEMOLITION

CALFEE CCC PHASE 2 HISTORIC RENOVATION DEMOLITION EXISTING ELEVATIONS

| | |
|-------------|--------------|
| DRAWN BY | ARW/LMC/STG |
| DESIGNED BY | ARW |
| CHECKED BY | ARW |
| DATE | 04/22/2021 |
| SCALE | 1/8" = 1'-0" |
| REVISIONS | |

D2.02

PROJECT NO 23220008.0



1
A0.01
CRAWLSPACE PLAN
1/8" = 1'-0"

2
B2.01



**BALZER
& ASSOCIATES**

PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

Roanoke / Richmond
New River Valley
Shenandoah Valley

www.balzer.cc

80 College Street, Suite H

Christiansburg, VA 24073

540.381.4290



CALFEE CCC PHASE 2
HISTORIC RENOVATION
CRAWL SPACE PLAN

1 CORBIN HARMON DRIVE
FOLKLAND, VIRGINIA 24051

DRAWN BY ARW/LMC/STC
DESIGNED BY ARW
CHECKED BY ARW
DATE 04/22/2025
SCALE 1/8" = 1'-0"
REVISIONS

A0.01

PROJECT NO 23220008.00

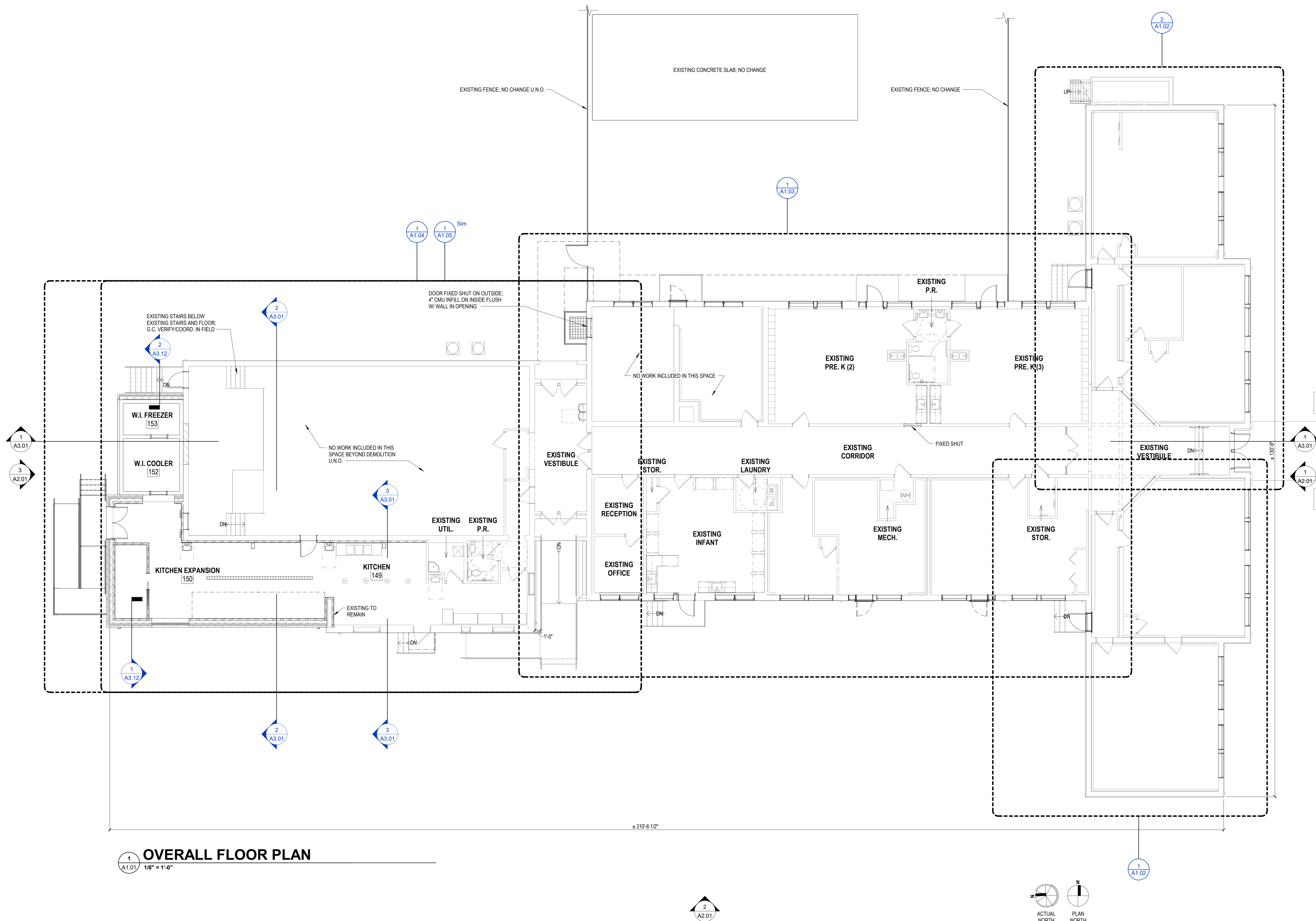


OVERALL FLOOR PLAN

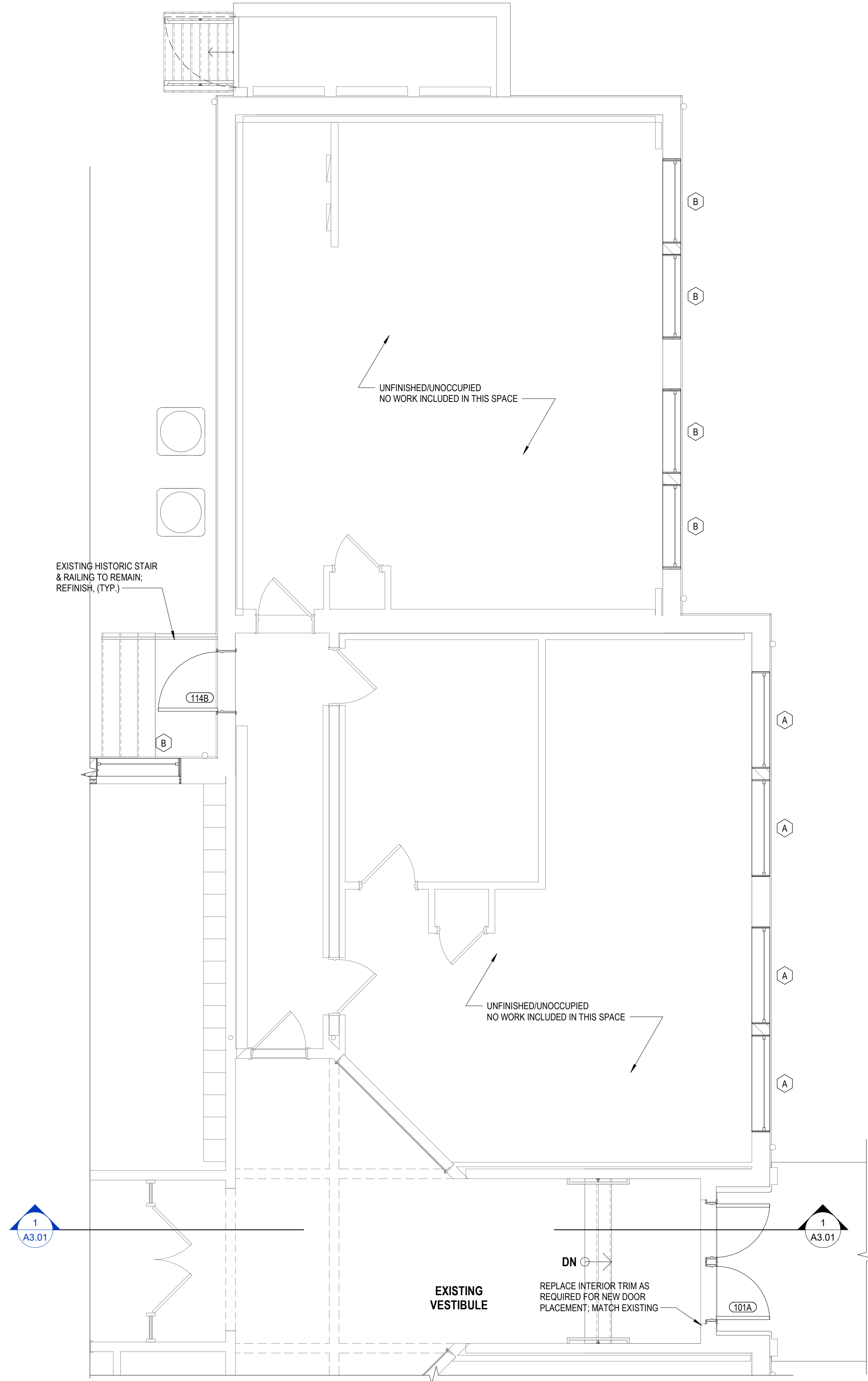
1 CORBIN-HARMON DRIVE
PULASKI, VIRGINIA 24301

REVISIONS

PROJECT NO 23220008.00

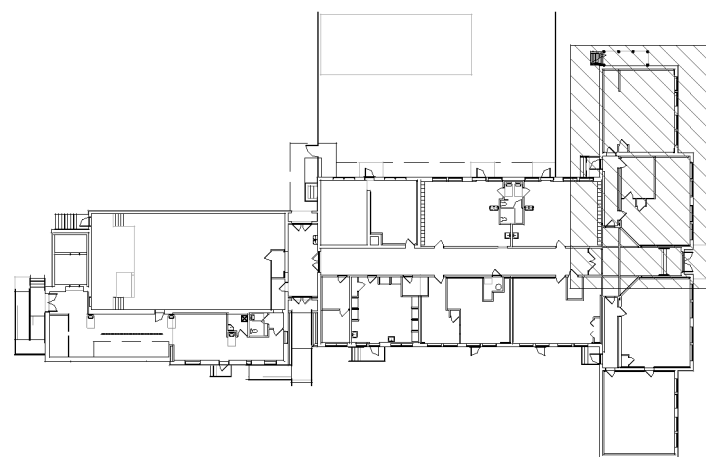


5/8/2025 3:41:39 PM
C:\Users\mason\Documents\Calfee\Bldg\Mod\23220008.00 CCC PHASE 2 - CENTRAL_A2.mxd
C:\Users\mason\Documents\Calfee\Bldg\Mod\23220008.00 CCC PHASE 2 - CENTRAL_A2.mxd

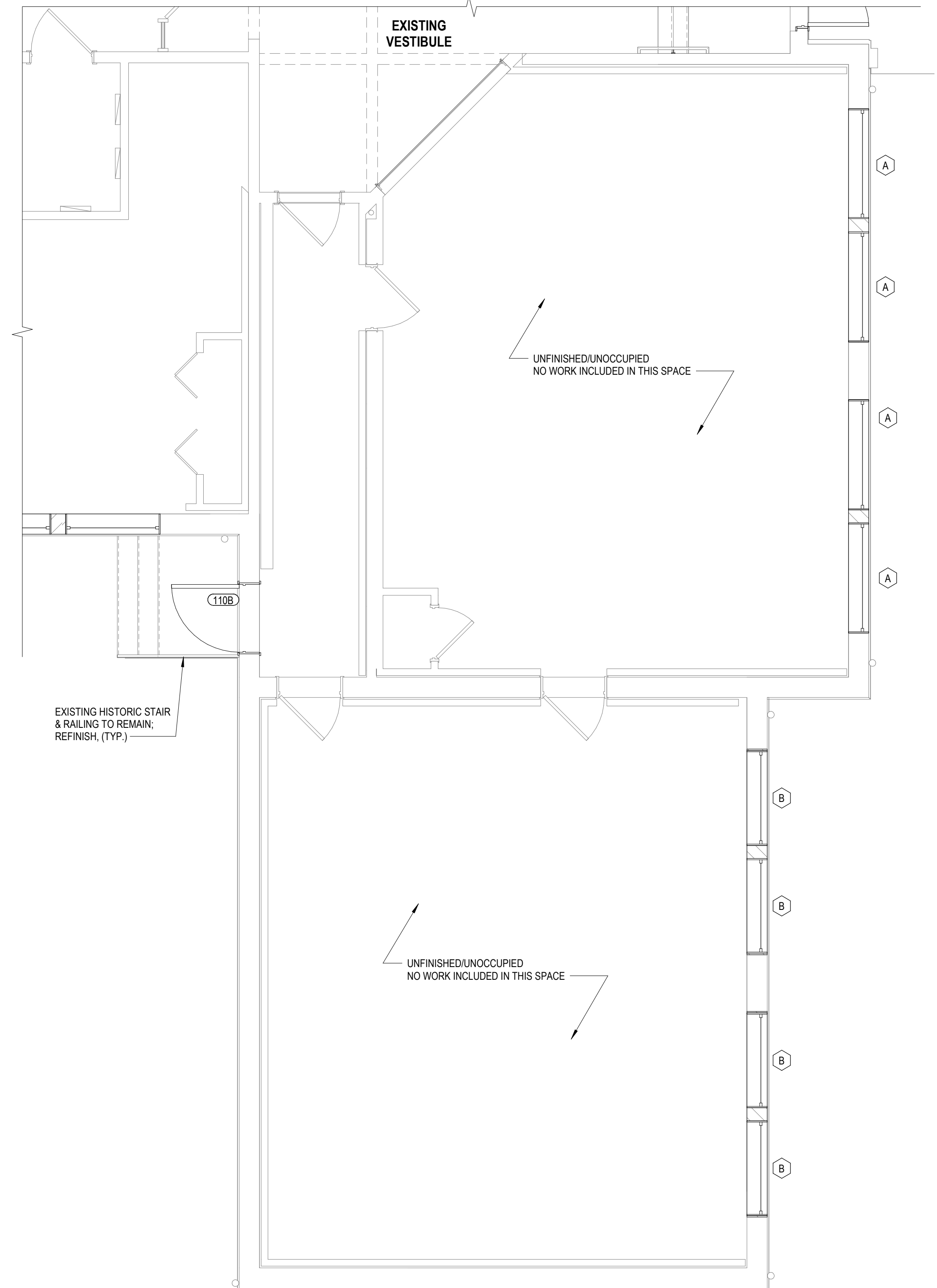


**ENLARGED PLAN
FUTURE ADMINISTRATION SE**

2
A1.02
1/4" = 1'-0"

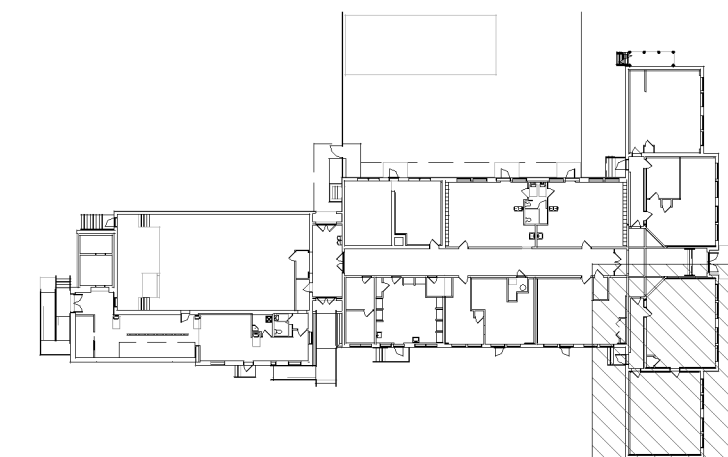
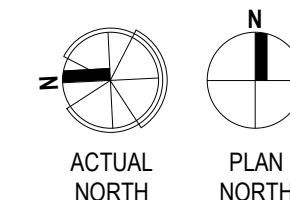


KEY PLAN



**ENLARGED PLAN
FUTURE ADMINISTRATION SW**

1
A1.02
1/4" = 1'-0"



KEY PLAN



**BALZER
& ASSOCIATES**

PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

Roanoke / Richmond
New River Valley
Shenandoah Valley

www.balzer.cc

80 College Street, Suite H

Christiansburg, VA 24073

540.381.4290

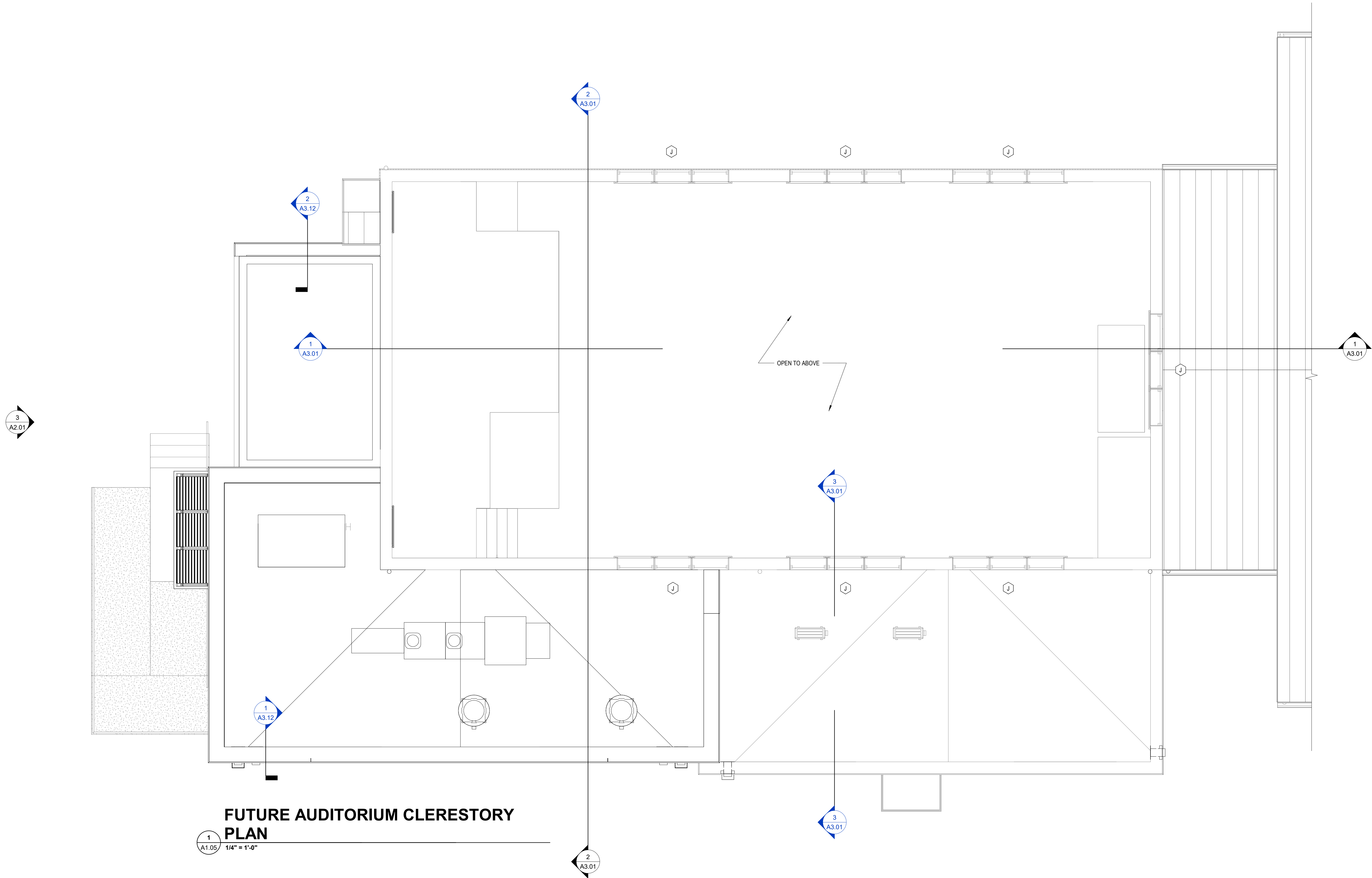


CALFEE CCC PHASE 2
HISTORIC RENOVATION
ENLARGED FLOOR PLANS - FUTURE ADMIN

1 CORBIN-HARMON DRIVE
FOLKLAND, VIRGINIA 24051

DRAWN BY ARW/LMC/STC
DESIGNED BY ARW
CHECKED BY ARW
DATE 04/22/2025
SCALE As indicated
REVISIONS

A1.02
PROJECT NO 23220008.00



**FUTURE AUDITORIUM CLERESTORY
PLAN**
1
A1.05
1/4" = 1'-0"



**BALZER
& ASSOCIATES**

PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

Roanoke / Richmond
New River Valley
Shenandoah Valley

www.balzer.cc

80 College Street, Suite H
Christiansburg, VA 24073
540.381.4290



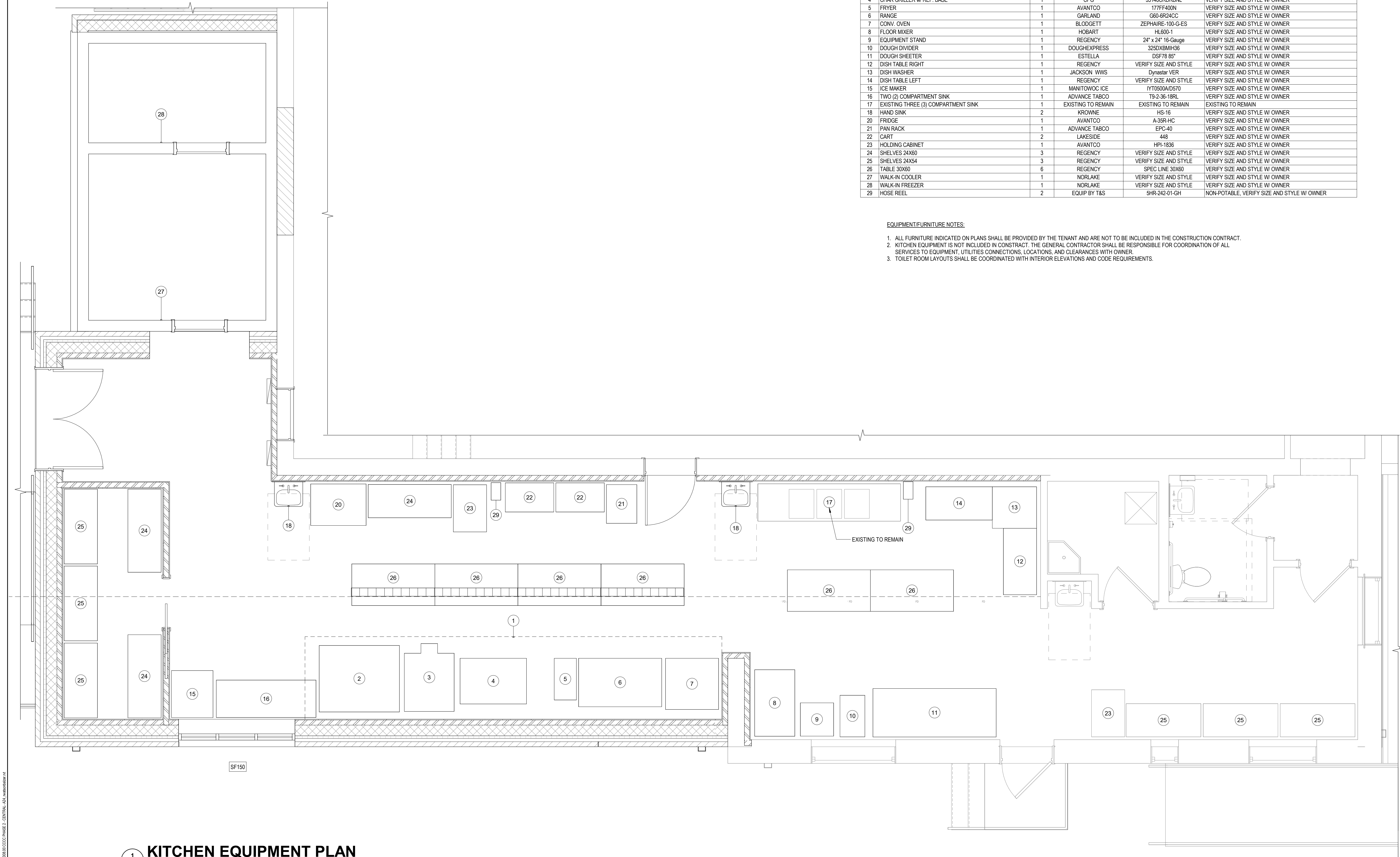
CALFEE CCC PHASE 2
HISTORIC RENOVATION
FUTURE AUDITORIUM CLERESTORY PLAN

1 CORBIN HARMON DRIVE
FOLKLAND, VIRGINIA 24051

DRAWN BY ARW/LMC/STC
DESIGNED BY ARW
CHECKED BY ARW
DATE 04/22/2025
SCALE 1/4" = 1'-0"
REVISIONS

A1.05

PROJECT NO 23220008.00



1
A1.06
KITCHEN EQUIPMENT PLAN
3/8" = 1'-0"

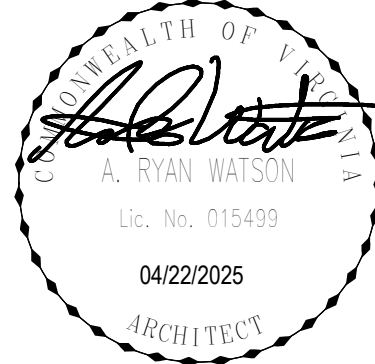


BALZER & ASSOCIATES
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

Roanoke / Richmond
New River Valley
Shenandoah Valley

www.balzer.cc

80 College Street, Suite H
Christiansburg, VA 24073
540.381.4290



CALFEE CCC PHASE 2
HISTORIC RENOVATION
KITCHEN EQUIPMENT PLAN

1 CORBIN-HARMON DRIVE
FOLKSBURG, VIRGINIA 24051

DRAWN BY ARW/LMC/STC
DESIGNED BY ARW
CHECKED BY ARW
DATE 04/22/2025
SCALE 3/8" = 1'-0"
REVISIONS

| CEILING TYPES | |
|---------------|--|
| MARK | DESCRIPTION |
| ACT 4.0 | 2x4' ACOUSTIC CEILING GRID |
| ACT 4.2 | 2x4' ACOUSTIC CEILING GRID (NON-POROUS/CLEANABLE) |
| ACT 4.3 | 2x4' ACOUSTIC CEILING IN EXISTING GRID (NON-POROUS/CLEANABLE) |

SEE ELECTRICAL AND MECHANICAL PLANS FOR
LOCATIONS OF LIGHTING, DIFFUSER, REGISTERS, ETC.



**BALZER
& ASSOCIATES**
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

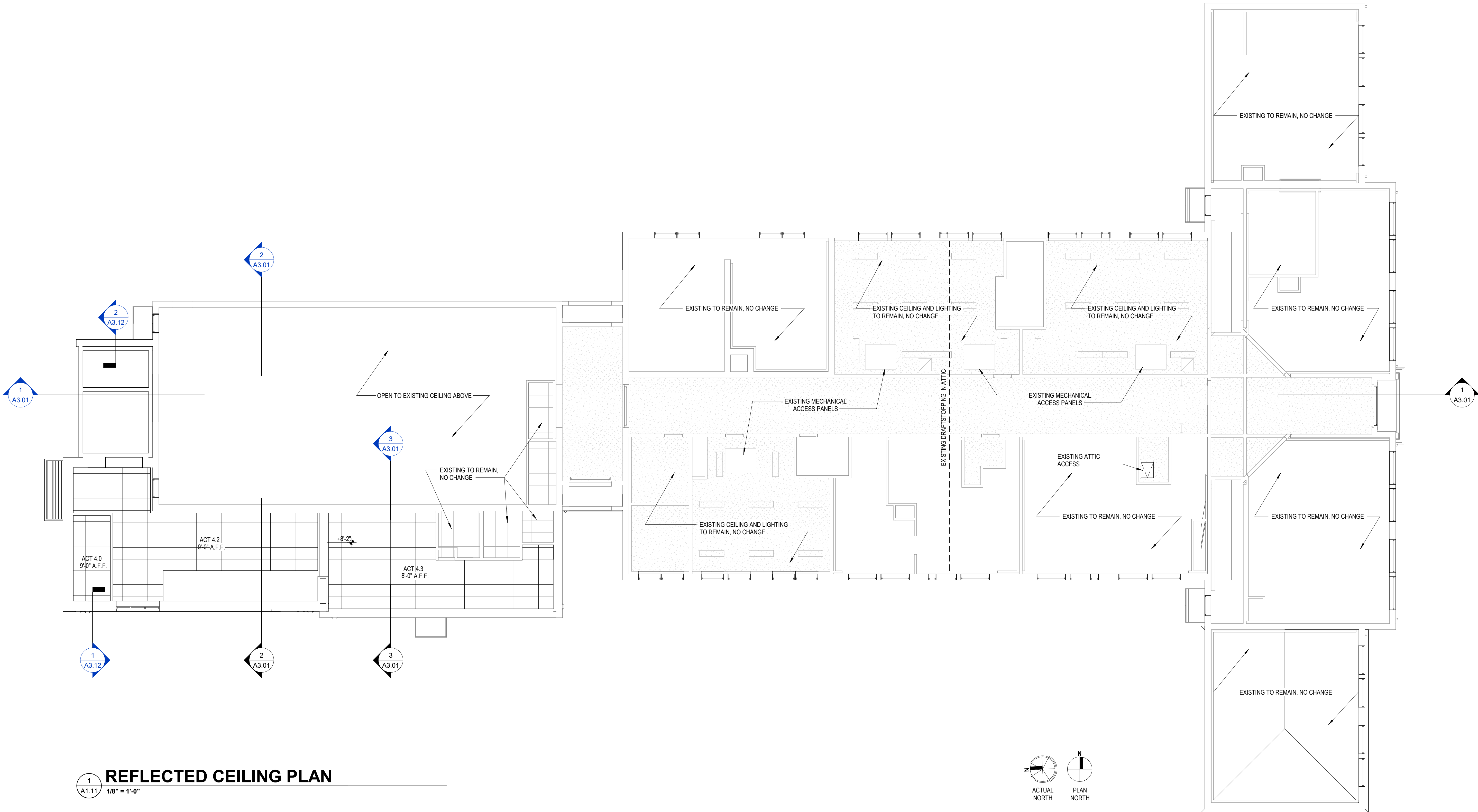
Roanoke / Richmond
New River Valley
Shenandoah Valley
www.balzer.cc
80 College Street, Suite H
Christiansburg, VA 24073
540.381.4290



CALFEE CCC PHASE 2
HISTORIC RENOVATION
REFLECTED CEILING PLAN

DRAWN BY **ARW/LMC/STC**
DESIGNED BY **ARW**
CHECKED BY **ARW**
DATE **04/22/2025**
SCALE **1/8" = 1'-0"**
REVISIONS

A1.11
PROJECT NO 23220008.00



1 REFLECTED CEILING PLAN
1/8" = 1'-0"

| PARTITION SCHEDULE | | | | |
|--------------------|---|-------------------|------------------|-----------------------------|
| TYPE | DESCRIPTION | RATING (HOURS) | UL DESIGN NO. | HEIGHT |
| 3.1 | 3-5/8" 20 GAUGE GALVANIZED STEEL STUDS AT 16" ON CENTER WITH 20 GAUGE GALVANIZED STEEL TOP AND BOTTOM TRACKS. SECURE BOTTOM TRACK TO FLOOR SLAB WITH RAMSET FASTENERS AT 24" ON CENTER. 3-1/2" (MIN) BATT INSULATION, CONTINUOUS AND FROM FLOOR TO TOP OF WALL, 5/8" GWB EACH SIDE. SECURE TO STUDS WITH NO. 6 SCREWS AT 12" ON CENTER MAX. TAPE AND FINISH ALL JOINTS. PROVIDE INTERMEDIATE WALL BLOCKING FOR PARTITIONS RECEIVING MOUNTED ACCESSORIES (CASEWORK, GRAB BARS, ETC.) | - | | UNDERSIDE OF ROOF STRUCTURE |
| 3.2 | SAME AS 3.1 WITH GWB ON ONE (1) SIDE ONLY | - | | <varies> |

| ROOM FINISH SCHEDULE | | | | | | | | |
|----------------------|-------------------|----------|----------|----------|----------|----------|--------|---------|
| NO. | ROOM NAME | FLOOR | TRIM | WALL | | CEILING | | REMARKS |
| | | | | MTL | FINISH | MTL | FINISH | |
| 149 | KITCHEN | EXISTING | EXISTING | EXISTING | EXISTING | EXISTING | - | |
| 150 | KITCHEN EXPANSION | VCT | B | GWB | FRP | ACT | - | |
| 151 | STOR. | VCT | B | GWB | FRP | ACT | - | |
| 152 | W.I. COOLER | TBD | - | - | MTL | MTL | - | |
| 153 | W.I. FREEZER | TBD | - | - | MTL | MTL | - | |

INTERIOR TRIM PROFILES:

WOOD TRIM SHALL MATCH EXISTING. USE THE TRIM CODE PROFILES IDENTIFIED BELOW AS BASIS OF DESIGN (G.C. VERIFY IN FIELD):
A. WOOD BASE: M163E 5-1/4"
B. VINYL COVE BASE
C. WOOD CROWN MOULDING: M45 5-1/4"; REPAIR / REPLACE EXISTING; MATCH EXISTING HISTORIC PROFILE
D. WOOD PICTURE CROWN MOULDING: M53 2-5/8"; REPAIR / REPLACE EXISTING; MATCH EXISTING HISTORIC PROFILE
E. TWO PIECE WOOD CROWN MOULDING: M47 4-5/8" + M432E 5-1/2"; REPAIR / REPLACE EXISTING; MATCH EXISTING HISTORIC PROFILE

ROOM FINISH NOTES:

- ALL SPACES NOTED AS WOOD (WD) FLOORING ON ROOM FINISH SCHEDULE IS ASSUMED TO HAVE EXISTING ORIGINAL HARDWOOD FLOORING UNDER THE CURRENT NON-HISTORIC CARPET OR PARQUET FLOORING. ALL EXISTING HARDWOOD FLOORING FOUND IS TO BE REPAIRED AND REFINISHED. IF HARDWOOD FLOORING IS FOUND TO BE UNABLE TO BE REPAIRED AND REFINISHED, NEW ENGINEERED HARDWOOD FLOORING SHALL BE INSTALLED. PROVIDE ADD/ALTERNATE COST FOR ENGINEERED HARDWOOD FLOORING IN LIEU OF REFINISHING EXISTING.
- ALL EXISTING WOOD TRIM IN WORK AREA ARE TO BE REFINISHED/REPAINTED. IF TRIM IS FOUND TO BE MISSING OR NOT ABLE TO BE REFINISHED IT SHALL BE REPLACED IN KIND.
- ALL EXISTING PLASTER CEILINGS IN WORK AREA SHALL BE STABILIZED AND PROVIDED WITH A NEW LAYER OF MINIMUM 1/4" DRYWALL (GYPSUM WALL BOARD) INSTALLED OVER THE EXISTING PLASTER.
 - WHERE EXISTING PLASTER CEILINGS ARE FOUND TO BE SUFFICIENTLY DAMAGED TO WARRANT REMOVAL THEY SHALL BE REMOVED, AND NEW 5/8" DRYWALL CEILING SHALL BE INSTALLED IN KIND.
- ACT TO BE INSTALLED IN UTILITY 14 & KITCHEN 149 SHALL BE CLEANABLE ACT.



**BALZER
& ASSOCIATES**

PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

Roanoke / Richmond
New River Valley
Shenandoah Valley

www.balzer.cc

80 College Street, Suite H
Christiansburg, VA 24073
540.381.4290



CALFEE CCC PHASE 2
HISTORIC RENOVATION
FINISH & PARTITION SCHEDULES

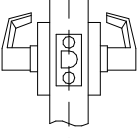
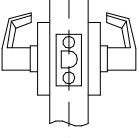
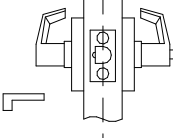
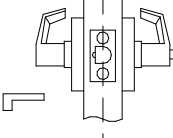
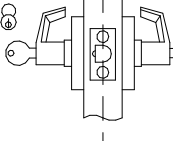
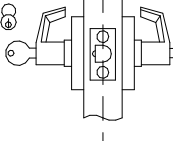
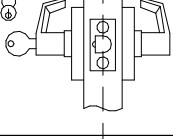
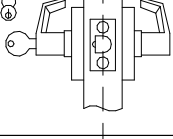
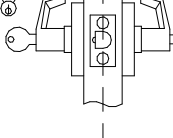
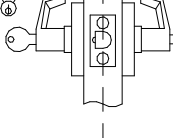
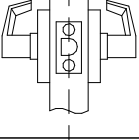
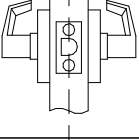
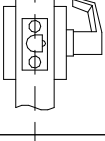
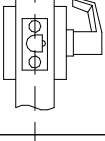
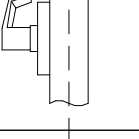
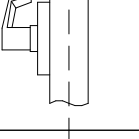
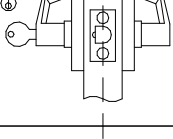
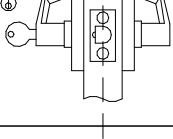
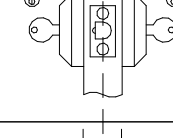
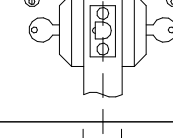
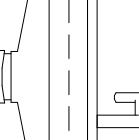
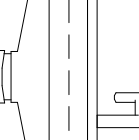
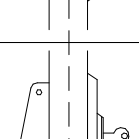
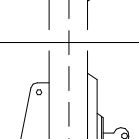
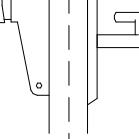
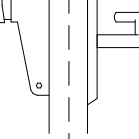
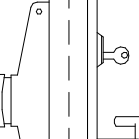
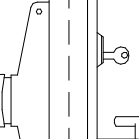
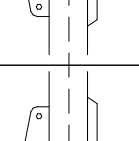
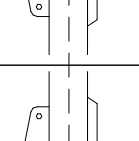
1 CORBIN HARMON DRIVE
FOLKSBURG, VIRGINIA 24051

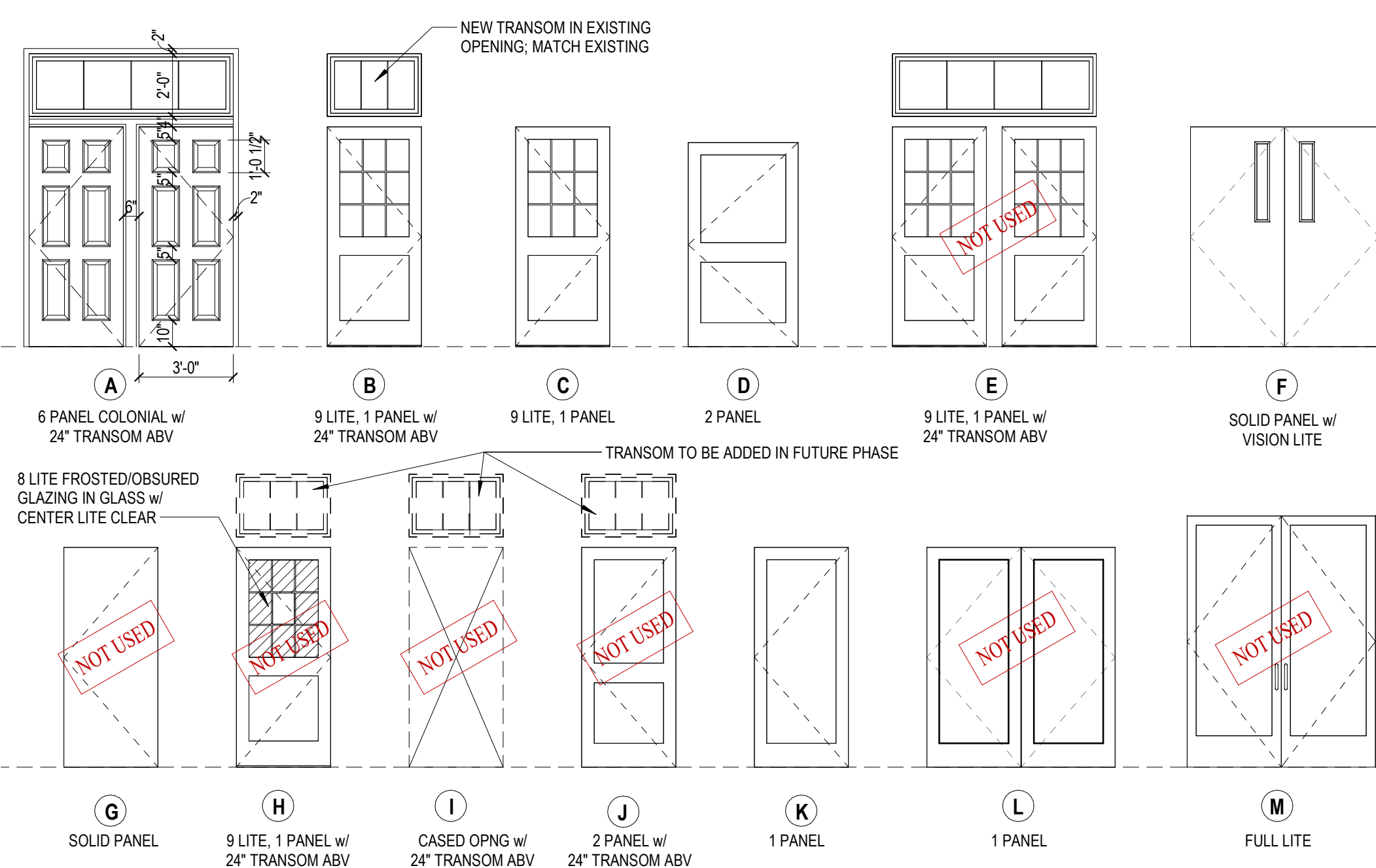
DRAWN BY **ARW/LMC/STC**
DESIGNED BY **ARW**
CHECKED BY **ARW**
DATE **04/22/2025**
SCALE
REVISIONS

A1.31

PROJECT NO 23220008.00

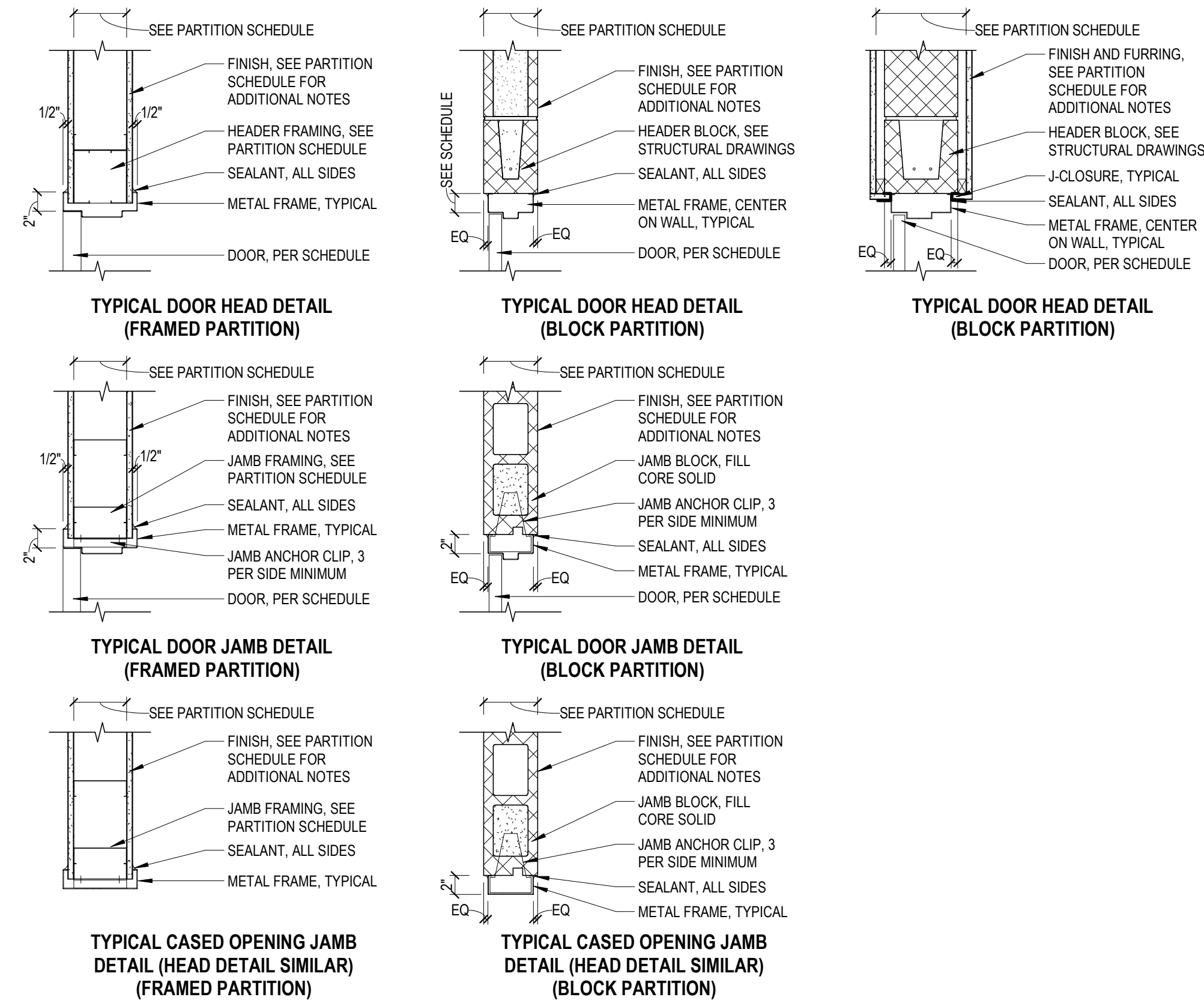
C:\Users\msh\Documents\Calfee\Bul Model\2220008.00 CCC PHASE 2 - CONTRL A24 - web\balzer.rvt 5/8/2023 3:41:48 PM

| DOOR LATCH TYPES | | | | |
|---|---|-------------------------------|-----------------|--|
| OUTSIDE | INSIDE | TYPE | ANSI SERIES | FUNCTION DESCRIPTION |
|  |  | PASSAGE OR CLOSET | F75 | <ul style="list-style-type: none">LATCHBOLT BY LEVER, EITHER SIDEBOTH LEVERS ALWAYS FREE |
|  |  | BEDROOM OR BATHROOM (PRIVACY) | F76 | <ul style="list-style-type: none">THROW-OFF LATCHBOLT BY LEVER EITHER SIDEOUTSIDE LEVER LOCKED BY PUSH BUTTONOUTSIDE LEVER UNLOCKED BY EMERGENCY RELEASE TOOL OUTSIDE, BY ROTATING LEVER OR BY CLOSING DOORINSIDE LEVER ALWAYS FREE |
|  |  | ENTRANCE OR OFFICE | F109 | <ul style="list-style-type: none">DEADLOCKING LATCHBOLT BY LEVER EITHER SIDE EXCEPT WHEN TURN BY BUTTON LOCKS OUTSIDE LEVER, REQUIRING USE OF KEY OUTSIDE TO UNLOCKTURNING INSIDE LEVER UNLOCKS LEVER (WHEN BUTTON IS PUSHED BUT NOT TURNED)PUSHING IN AND TURNING BUTTON LOCKS OUTSIDE LEVER, REQUIRING KEY AT ALL TIMESTURNING INSIDE LEVER DOES NOT UNLOCK OUTSIDE LEVER UNTIL BUTTON IS MANUALLY TURNED TO THE UNLOCKED POSITIONINSIDE LEVER ALWAYS FREE |
|  |  | STORE ROOM OR CLOSET | F86 | <ul style="list-style-type: none">DEADLOCKING LATCHBOLT BY KEY IN OUTSIDE LEVER OR BY ROTATING INSIDE LEVEROUTSIDE LEVER ALWAYS RIGIDINSIDE LEVER ALWAYS FREE |
|  |  | ENTRANCE OR OFFICE | F82 | <ul style="list-style-type: none">DEADLOCKING LATCHBOLT BY LEVER EITHER SIDE EXCEPT WHEN PUSH BUTTON LOCKS OUTSIDE LEVERPUSH BUTTON RELEASED BY TURNING INSIDE LEVER OR BY KEY IN OUTSIDE LEVERCLOSING DOOR DOES NOT RELEASE PUSH BUTTONINSIDE LEVER IS ALWAYS FREE |
|  |  | EXIT LOCK | F89 | <ul style="list-style-type: none">OUTSIDE LEVER ALWAYS FIXEDINSIDE LEVER ALWAYS FREE |
|  |  | EXIT ONLY | --- | <ul style="list-style-type: none">BLANK PLATE OUTSIDEINSIDE LEVER ALWAYS FREE |
|  |  | DUMMY | --- | <ul style="list-style-type: none">OUTSIDE FIXED TRIM ONLY (USED FOR DOOR PULL OR AS MATCHING INACTIVE TRIM) |
|  |  | CLASSROOM LOCK | F84 | <ul style="list-style-type: none">OUTSIDE LEVEL LOCKED AND UNLOCKED BY KEYINSIDE LEVER ALWAYS FREE |
|  |  | DOUBLE CYLINDER | ANSI E214 E6142 | <ul style="list-style-type: none">DEADBOLT THROWN OR RETRACTED BY KEY ON EITHER SIDE.BOTH AUTOMATICALLY DEADLOCKS WHEN FULLY THROWN. |
|  |  | DUMMY | 02 | <ul style="list-style-type: none">MAY BE INSTALLED WITH SURFACE VERTICAL ROD OR WITH CONCEALED VERTICAL RODENTRANCE BY TRIM WHEN ACTUATING BAR IS LOCKED DOWN. |
|  |  | NIGHTLATCH | 03 | <ul style="list-style-type: none">MAY BE INSTALLED WITH SURFACE VERTICAL ROD OR WITH CONCEALED VERTICAL RODENTRANCE BY TRIM WHEN LATCHBOLT IS RELEASED BY KEY. KEY REMOVABLE ONLY WHEN LOCKED. |
|  |  | CLASSROOM | 08 | <ul style="list-style-type: none">MAY BE INSTALLED WITH SURFACE VERTICAL ROD OR WITH CONCEALED VERTICAL RODENTRANCE BY KNOB OR LEVER. KEY LOCKS OR UNLOCKS KNOB OR LEVER. |
|  |  | PASSAGE | 14 | <ul style="list-style-type: none">MAY BE INSTALLED WITH SURFACE VERTICAL ROD OR WITH CONCEALED VERTICAL RODENTRANCE BY TRIM WHEN LATCHBOLT IS RELEASED BY KNOB OR LEVER. KNOB OR LEVER ALWAYS ACTIVE, NO CYLINDER. |
|  |  | STORE ROOM (GRIP ACTIVE) | 09 | <ul style="list-style-type: none">MAY BE INSTALLED WITH SURFACE VERTICAL ROD OR WITH CONCEALED VERTICAL RODENTRANCE BY KNOB OR LEVER ONLY WHEN RELEASED BY KEY. KEY REMOVABLE ONLY WHEN LOCKED. |



DOOR TYPES

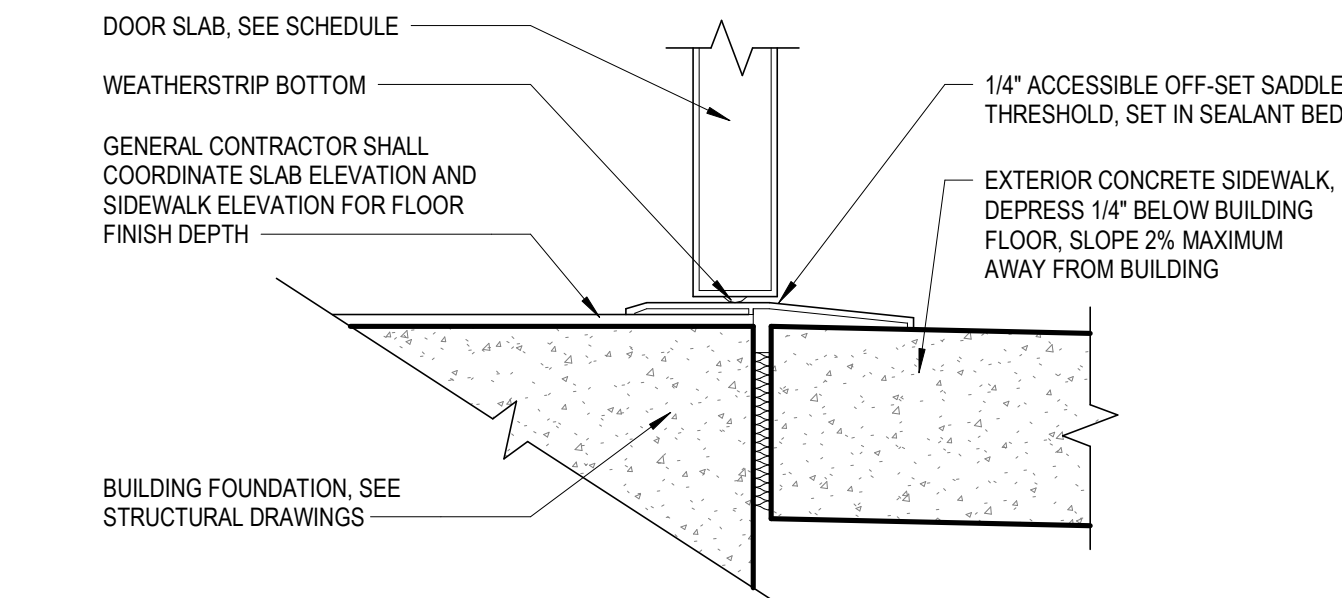
NOT TO SCALE



NOTE: DETAILS ONLY DEPICT GENERAL CONDITIONS FOR TYPICAL HOLLOW METAL FRAMED DOORS AND OPENINGS. FOR DOORS IN RATED ASSEMBLIES COORDINATE PARTITION DESCRIPTION WITH PARTITION SCHEDULE AND WALL RATING DETAILS, TYPICAL.

TYPICAL DOOR DETAILS

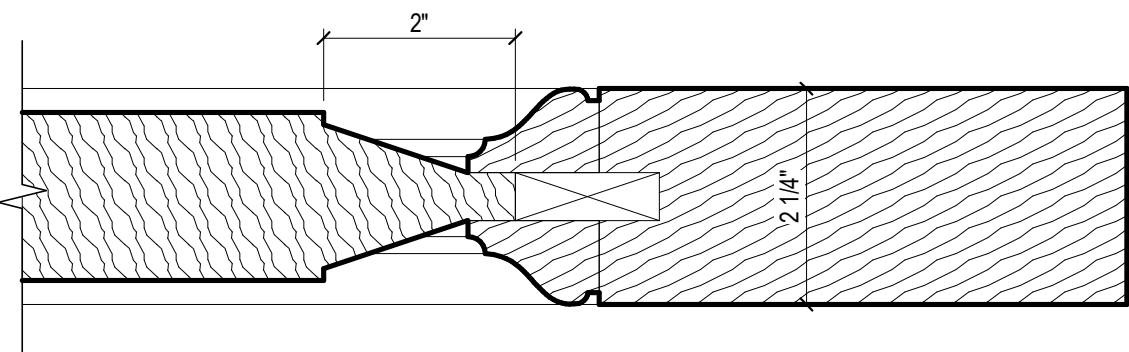
1 A1.32 NOT TO SCALE



EXTERIOR DOOR THRESHOLD

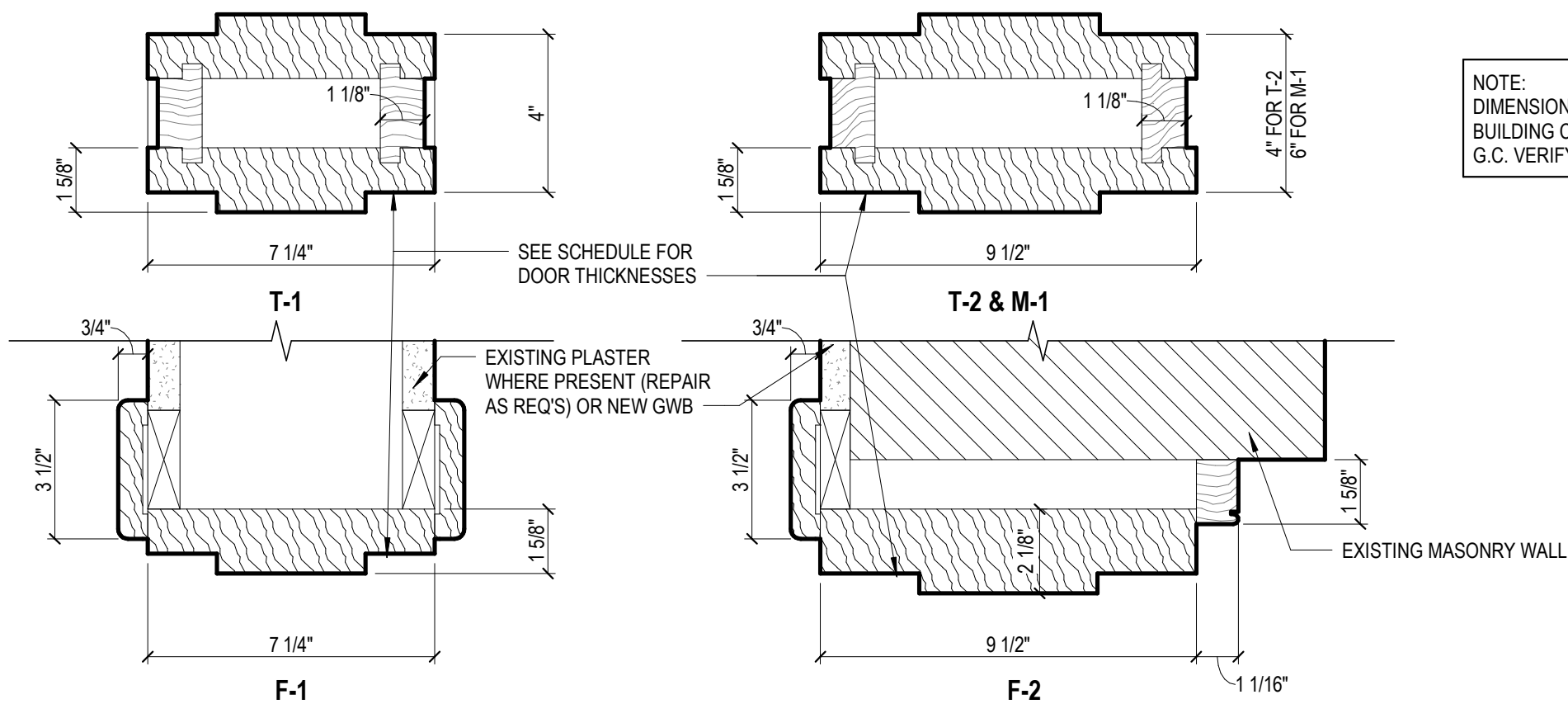
3 A1.32 3" = 1'-0"

| DOOR SCHEDULE | | | | | | | | | | | | |
|---------------|-----------|--------|-----------|------------|-------------|------|-----------|-----------------|-----------------|------------|------------|--|
| MARK | WIDTH | HEIGHT | THICKNESS | MATERIAL | LABEL (MIN) | TRHD | DOOR TYPE | FRAME TYPE | TRSM BAR | MULL. | HDWR SET # | REMARKS |
| 101A | 3'-0" (2) | 7'-0" | 0'-2 1/4" | ALUM. CLAD | | Yes | A | ALUM. CLAD | ALUM. CLAD | ALUM. CLAD | 1 | DOUBLE DOOR w/ REMOVABLE 6" MULLION POST & 24" TRANSOM; SEE HISTORIC FRONT ENTRANCE DOOR DETAIL/SECTION |
| 110B | 3'-4" | 7'-0" | 0'-2 1/4" | ALUM. CLAD | | Yes | B | ALUM. CLAD/ F-2 | ALUM. CLAD/ T-2 | | 3 | |
| 114B | 3'-4" | 7'-0" | 0'-2 1/4" | ALUM. CLAD | | Yes | B | ALUM. CLAD/ F-2 | ALUM. CLAD/ T-2 | | 3 | |
| 120B | 3'-0" | 7'-4" | 0'-1 3/4" | ALUM. CLAD | | Yes | C | ALUM. CLAD | | | 10 | INFILL PANEL AROUND DOOR IN OPENING CREATED FROM REMOVAL OF EXISTING WINDOW |
| 122B | 3'-0" | 7'-4" | 0'-1 3/4" | ALUM. CLAD | | Yes | C | WD | | | 10 | INFILL PANEL AROUND DOOR IN OPENING CREATED FROM REMOVAL OF EXISTING WINDOW |
| 123B | 3'-0" | 7'-4" | 0'-1 3/4" | ALUM. CLAD | | Yes | C | WD | | | 10 | |
| 126B | 3'-0" | 7'-4" | 0'-1 3/4" | ALUM. CLAD | | Yes | C | WD | | | 10 | |
| 130B | 3'-0" | 7'-4" | 0'-1 3/4" | ALUM. CLAD | | Yes | C | WD | | | 10 | |
| 133B | 3'-0" | 7'-4" | 0'-1 3/4" | ALUM. CLAD | | Yes | C | WD | | | 10 | INFILL PANEL AROUND DOOR IN OPENING CREATED FROM REMOVAL OF EXISTING WINDOW |
| 137C | 3'-6" | 6'-6" | 0'-1 3/4" | MTL | | Yes | D | HM | | | - | EXISTING DOOR TO BE REFURBISHED/REFINISHED (REPLACE IF NECESARY, G.C. CONSULT ARCHITECT) AND FIXED IN-PLACE ON EXTERIOR SIDE OF WALL |
| 140D | 3'-0" | 7'-0" | 0'-2 1/4" | ALUM. CLAD | | Yes | B | ALUM. CLAD/ F-2 | ALUM. CLAD/ T-2 | | 3a | |
| 140L | 3'-0" | 7'-0" | 0'-2 1/4" | SCW | | | B | F-2 | T-2 | | | NEW DOOR FIXED IN PLACE; PROVIDE OPAQUE BACKING BEYOND GLAZING |
| 150A | 3'-0" | 7'-0" | 0'-1 3/8" | SCW | | | K | WD | | | 16 | |
| 150B | 6'-0" (2) | 7'-0" | 0'-1 3/4" | MTL | | Yes | F | HM | | | 18 | DOUBLE DOOR; MIN. 5'x30" VIEW PANEL EA. DOOR PANEL |
| 151 | 3'-0" | 7'-0" | 0'-1 3/8" | SCW | | | W | WD | | | 12 | |



HISTORIC FRONT ENTANCE DOOR DETAIL/SECTION

NOT TO SCALE



NOTE: DIMENSIONS ARE BASED ON ORIGINAL BUILDING CONSTRUCTION DOCUMENTS; G.C. VERIFY & COORDINATE IN FIELD

HISTORIC DOOR FRAME DETAILS

NOT TO SCALE

HARDWARE SETS

DOOR HARDWARE SETS

- ENTRANCE (2) DOORS
(3) PAIR HINGES
(2) PANIC/LATCH SET (ANSI 03 OR SIM)
(1) EACH DOOR LEAF
(LEVER HANDLE ENTRY)
INTERIOR PANIC BAR w/ CONCEALED VERTICAL RODS FOR EACH DOOR LEAF
(2) CLOSERS
ACCESSIBLE THRESHOLD
WEATHERSTRIPPING
ELECTRONIC STRIKE
1a. ENTRANCE (2) DOORS
(3) PAIR HINGES
(2) PANIC/LATCH SET (ANSI 03 OR SIM)
(1) EACH DOOR LEAF
(LEVER HANDLE ENTRY)
INTERIOR PANIC BAR w/ CONCEALED VERTICAL RODS FOR EACH DOOR LEAF
(2) CLOSERS
ACCESSIBLE THRESHOLD
WEATHERSTRIPPING
ELECTRONIC STRIKE
2. INTERIOR ENTRANCE (2) DOORS
(3) PAIR HINGES
(2) PANIC/LATCH SET (ANSI 03 OR SIM)
(1) EACH DOOR LEAF
(LEVER HANDLE ENTRY)
INTERIOR PANIC BARS w/ CONCEALED VERTICAL RODS FOR EACH DOOR LEAF
(2) CLOSERS
ACCESSIBLE THRESHOLD
WEATHERSTRIPPING
ELECTRONIC STRIKE
3. ENTRANCE (SINGLE)
(1-1/2) PAIR HINGES
(1) PANIC/LATCH SET (ANSI 03 OR SIM)
(LEVER HANDLE ENTRY)
INTERIOR PANIC BAR w/ CONCEALED VERTICAL ROD
(1) CLOSER
ACCESSIBLE THRESHOLD
WEATHERSTRIPPING
ELECTRONIC STRIKE
4. INTERIOR ENTRANCE (DOUBLE)
(3) PAIR HINGES
(1) PANIC/LATCH SET (ANSI 03 OR SIM)
(LEVER HANDLE ENTRY)
INTERIOR PANIC BARS w/ CONCEALED VERTICAL RODS FOR EACH DOOR LEAF
(1) CLOSER
ELECTRONIC STRIKE
5. (NOT USED)
6. (NOT USED)
7. (1-1/2) PAIR HINGES
(1) LATCH SET: ANSI F109
(LEVER HANDLE)
(1) CLOSER
(1-1/2) PAIR HINGES
(1) LATCH SET: ANSI F86
(LEVER HANDLE)
(1) CLOSER
(1-1/2) PAIR HINGES
(1) LATCH SET: ANSI F84
(LEVER HANDLE)
(1) CLOSER
ELECTRONIC STRIKE
9a. (1-1/2) PAIR HINGES
(1) LATCH SET: ANSI F84
(LEVER HANDLE)
(1) CLOSER
(1-1/2) PAIR HINGES
(1) LOCK SET (ANSI 86)
(LEVER HANDLE CLASSROOM EXTERIOR)
(1) CLOSER
ACCESSIBLE THRESHOLD
WEATHERSTRIPPING
11. (NOT USED)
12. (1-1/2) PAIR HINGES
(1) LATCH SET: ANSI F75
(LEVER HANDLE)
13. (NOT USED)
14. (NOT USED)
15. (NOT USED)
16. (NOT USED)
17. (1 1/2) PAIR HINGES
(1) LATCH SET: ANSI F86
(LEVER HANDLE)
(1) CLOSER
ACCESSIBLE THRESHOLD
WEATHERSTRIPPING
KICK PLATE
18. (NOT USED)

* VERIFY WITH OWNER
TRIMBLE TO PROVIDE HARDWARE VALUE
ENGINEERED HARDWARE CUT SHEETS FOR APPROVAL



BALZER & ASSOCIATES
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

Roanoke / Richmond
New River Valley
Shenandoah Valley
www.balzer.cc
80 College Street, Suite H
Christiansburg, VA 24073
540.381.4290



CALFEE CCC PHASE 2

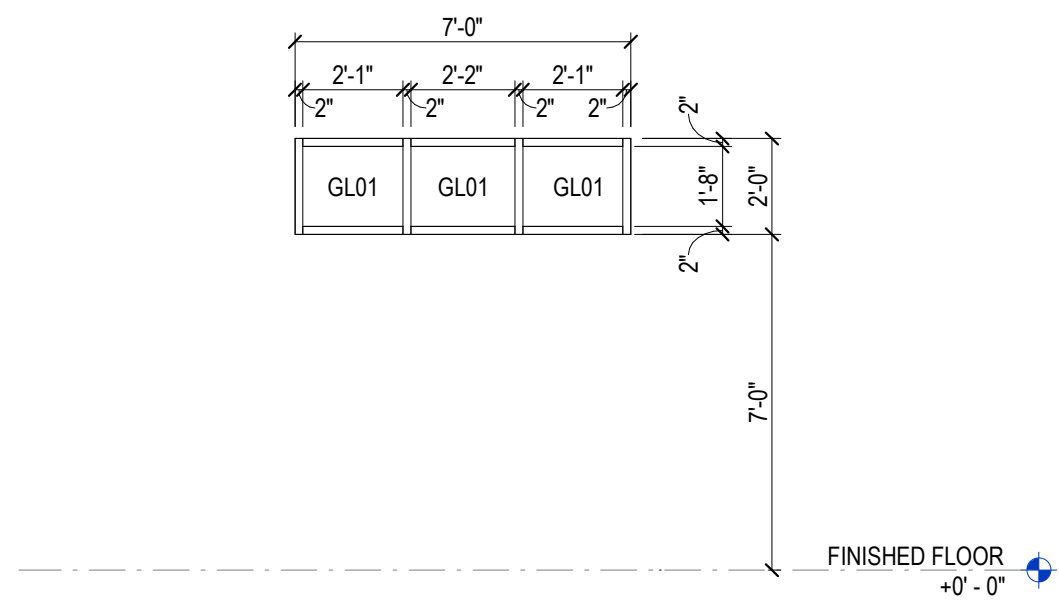
HISTORIC RENOVATION
DOOR SCHEDULES

1 CORBIN HARMON DRIVE
FLORENCE, VIRGINIA 24601

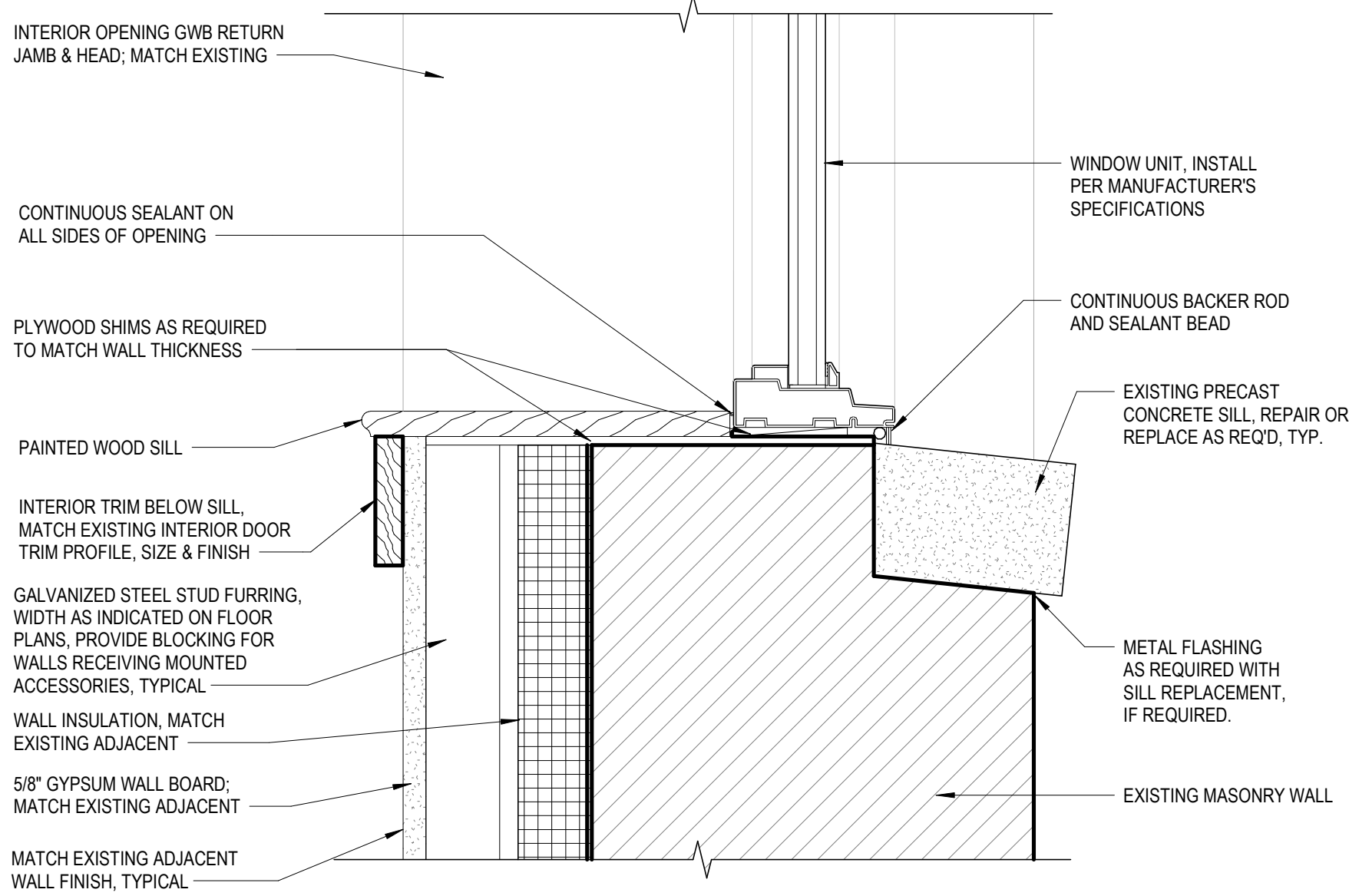
DRAWN BY ARW/LMC/STC
DESIGNED BY ARW
CHECKED BY ARW
DATE 04/22/2025
SCALE As indicated
REVISIONS

A1.32

PROJECT NO 23220008.00



| GLAZING SCHEDULE | |
|------------------|--------------------|
| MARK | DESCRIPTION |
| GL01 | 1" THICK INSULATED |

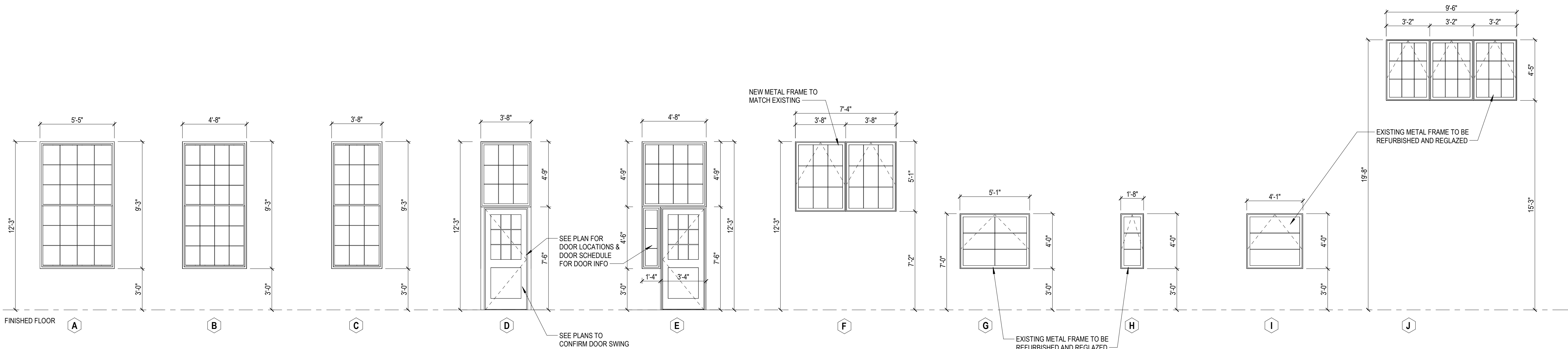


1

A1.33

3" = 1'-0"

APPLICABLE NEW WINDOW INSTALLATION FOR TYPES A, B, C, D, & E



WINDOW TYPES

NOT TO SCALE

- WINDOW SCHEDULE NOTES
1.

ALL NEW WINDOW A THROUGH E TO BE ALUMINUM CLAD; WINDOW SIZES SHOWN ARE APPROXIMATED TO FIT EXISTING OPENINGS; G.C. COORDINATE FINAL SIZES PER SITE CONDITIONS & MANUFACTURER SPECIFICATONS.
2.

G.C. TO VERIFY ALL EXISTING DOOR AND WINDOW OPENINGS IN FIELD, DIMENSIONS SHOWN ARE APPROXIMATE.
3.

SEE CODE SUMMARY AND SPECIFICATIONS FOR ENERGY REQUIREMENTS.

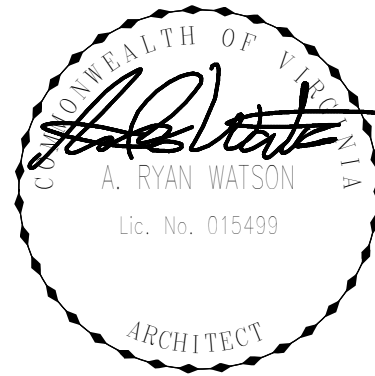


BALZER & ASSOCIATES
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

Roanoke / Richmond
New River Valley
Shenandoah Valley

www.balzer.cc

80 College Street, Suite H
Christiansburg, VA 24073
540.381.4290

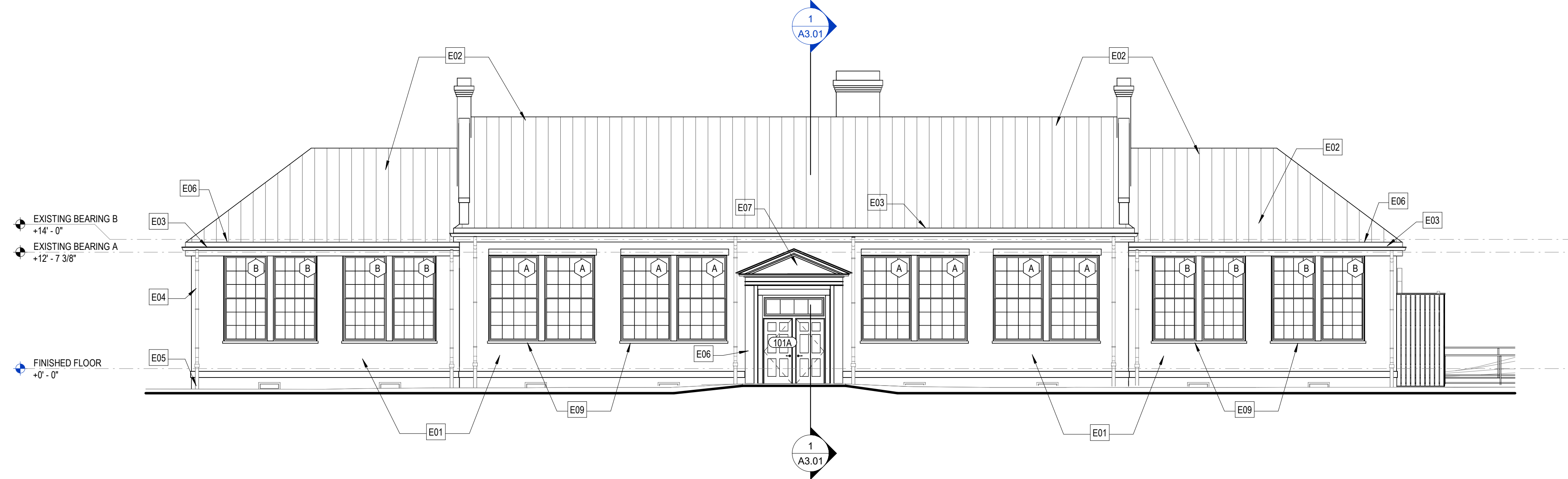


CALFEE CCC PHASE 2
HISTORIC RENOVATION
STOREFRONT ELEVATIONS AND WINDOW TYPES

1 CORBIN HARMON DRIVE
FOLKLAND, VIRGINIA 24051

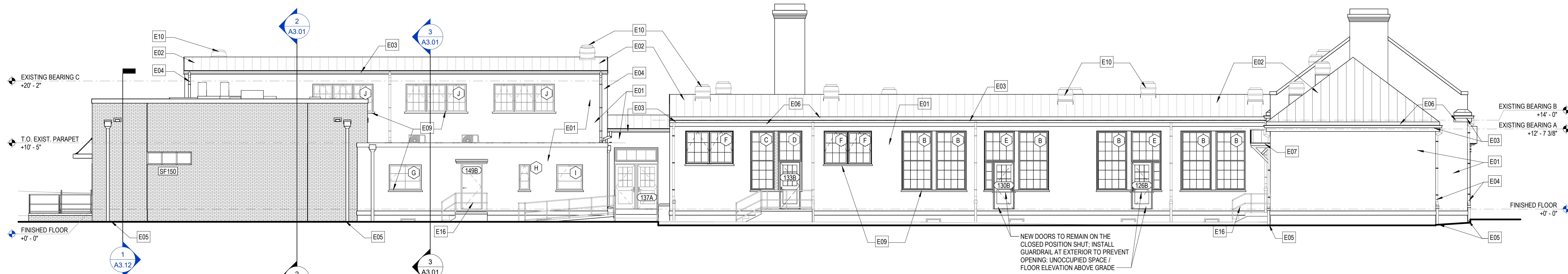
DRAWN BY **ARW/LMC/STC**
DESIGNED BY **ARW**
CHECKED BY **ARW**
DATE **04/22/2025**
SCALE **As indicated**
REVISIONS

A1.33
PROJECT NO 23220008.00

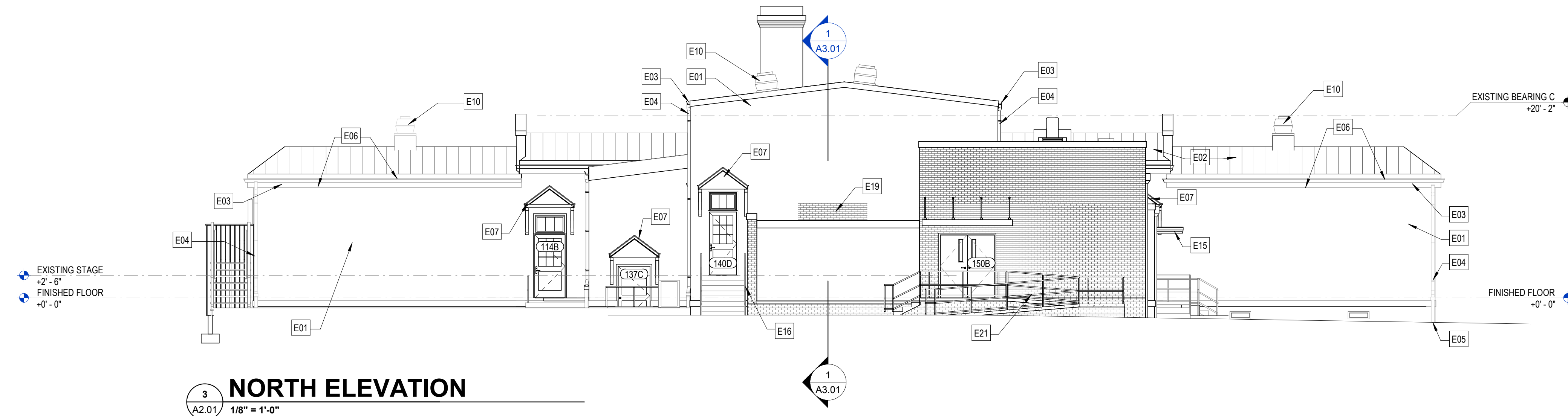


1 SOUTH ELEVATION
A2.01 1/8" = 1'-0"

| ELEVATION SHEET KEY NOTES | |
|---------------------------|---|
| E01 | EXISTING MASONRY WALL W/ BRICK VENEER. REPAIR/REPOINT GROUT AS REQ'D, TYP. |
| E02 | NEW STANDING SEAM METAL ROOF. |
| E03 | REPLACE EXISTING GUTTERS WITH NEW 6" K-STYLE (OGEE) PAINTED METAL GUTTERS, TYP. |
| E04 | REPLACE EXISTING DOWNSPOUTS WITH MIN. 4" ROUND DOWNSPOUT, TYP. |
| E05 | NEW SPLASH BLOCK AT BOTTOM OF DOWNSPOUT (TYP.) |
| E06 | ALL EXISTING EXTERIOR TRIM, FASCIA, ETC. TO BE REFINISHED/PAINTED; REPAIR/REPLACE AS REQUIRED, MATCH EXISTING |
| E07 | EXISTING PORTICO. REPAIR OR REPLACE & REFINISH TRIM, NEW METAL ROOFING AND FLASHING |
| E09 | EXISTING PRECAST CONCRETE SILL. REPAIR OR REPLACE AS REQ'D, TYP. |
| E10 | EXISTING METAL ROOF VENT. SEE MECHANICAL PLAN FOR ADDITIONAL INFO, TYP. |
| E15 | EXISTING AWNING. REPAIR OR REPLACE TRIM. ROOFING AND FLASHING AS REQ'D, TYP. |
| E16 | EXISTING HISTORIC STAIR & RAILING TO REMAIN; REFINISH, (TYP.) |
| E19 | INFILL EXISTING WALL OPENING. MATCH EXISTING ADJACENT MATERIALS; TOOTH NEW BRICK INTO EXISTING. |
| E21 | NEW RAMP AND RAILING. SEE PLANS |



2 WEST ELEVATION
A2.01 1/8" = 1'-0"



3 NORTH ELEVATION
A2.01 1/8" = 1'-0"



BALZER & ASSOCIATES

PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

Roanoke / Richmond
New River Valley
Shenandoah Valley

www.balzer.cc

80 College Street, Suite H

Christiansburg, VA 24073

540.381.4290



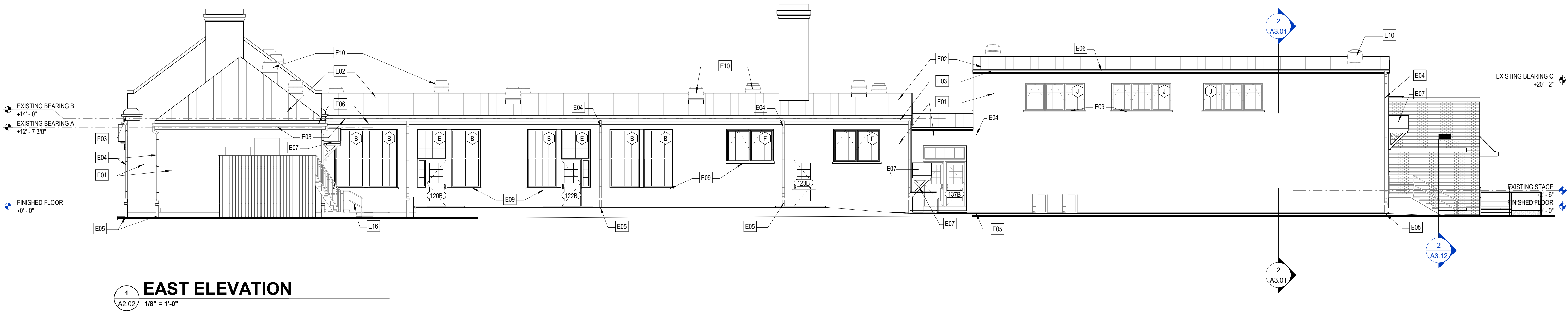
CALFEE CCC PHASE 2
HISTORIC RENOVATION
EXTERIOR ELEVATIONS

1 CORBIN-HARMON DRIVE
FOLKLAND, VIRGINIA 24041

DRAWN BY ARW/LMC/STC
DESIGNED BY ARW
CHECKED BY ARW
DATE 04/22/2025
SCALE 1/8" = 1'-0"
REVISIONS

A2.01
PROJECT NO 23220008.00

| ELEVATION SHEET KEY NOTES | |
|---------------------------|---|
| E01 | EXISTING MASONRY WALL W/ BRICK VENEER. REPAIR/REPOINT GROUT AS REQ'D, TYP. |
| E02 | NEW STANDING SEAM METAL ROOF. |
| E03 | REPLACE EXISTING GUTTERS WITH NEW 6" K-STYLE (OGEE) PAINTED METAL GUTTERS, TYP. |
| E04 | REPLACE EXISTING DOWNSPOUTS WITH MIN. 4" ROUND DOWNSPOUT, TYP. |
| E05 | NEW SPLASH BLOCK AT BOTTOM OF DOWNSPOUT (TYP.) |
| E06 | ALL EXISTING EXTERIOR TRIM, FASCIA, ETC. TO BE REFINISHED/PAINTED; REPAIR/REPLACE AS REQUIRED, MATCH EXISTING |
| E07 | EXISTING PORTICO, REPAIR OR REPLACE & REFINISH TRIM; NEW METAL ROOFING AND FLASHING |
| E09 | EXISTING PRECAST CONCRETE SILL, REPAIR OR REPLACE AS REQ'D, TYP. |
| E10 | EXISTING METAL ROOF VENT. SEE MECHANICAL PLAN FOR ADDITIONAL INFO, TYP. |
| E15 | EXISTING AWNING, REPAIR OR REPLACE TRIM, ROOFING AND FLASHING AS REQ'D, TYP. |
| E16 | EXISTING HISTORIC STAIR & RAILING TO REMAIN; REFINISH, (TYP.) |
| E19 | INFILL EXISTING WALL OPENING. MATCH EXISTING ADJACENT MATERIALS; TOOTH NEW BRICK INTO EXISTING. |
| E21 | NEW RAMP AND RAILING, SEE PLANS |



**BALZER
& ASSOCIATES**

PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

Roanoke / Richmond
New River Valley
Shenandoah Valley

www.balzer.cc

80 College Street, Suite H

Christiansburg, VA 24073

540.381.4290

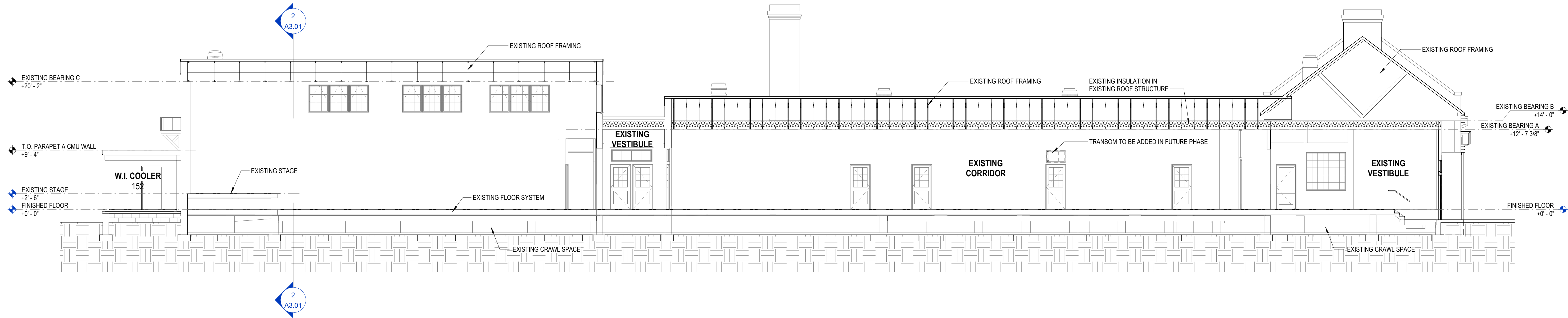


CALFEE CCC PHASE 2
HISTORIC RENOVATION
EXTERIOR ELEVATIONS

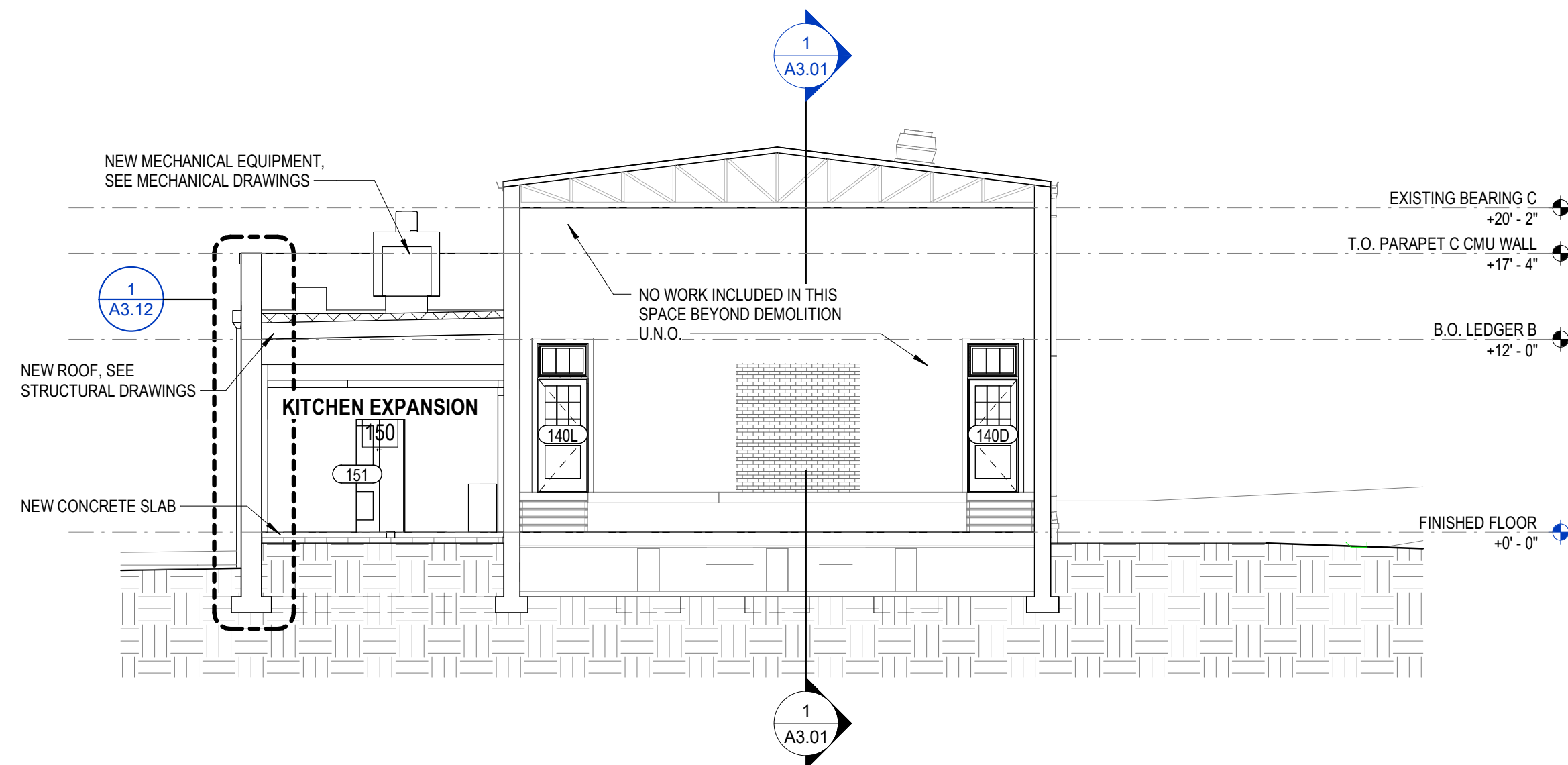
1 CORBIN-HARMON DRIVE
POLASKI, VIRGINIA 24051

DRAWN BY ARW/LMC/STC
DESIGNED BY ARW
CHECKED BY ARW
DATE 04/22/2025
SCALE 1/8" = 1'-0"
REVISIONS

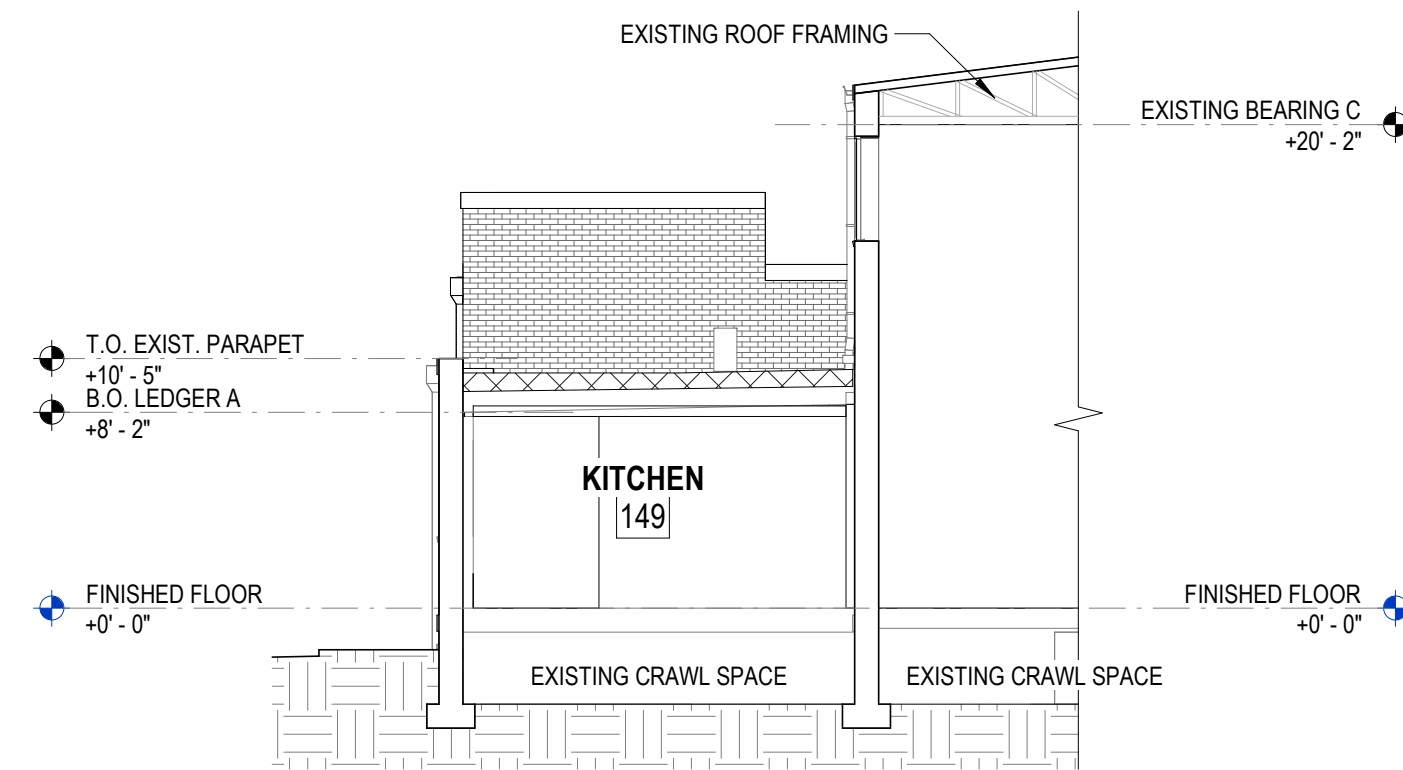
A2.02
PROJECT NO 23220008.00



1
A3.01
BUILDING LONGITUDINAL SECTION
1/8" = 1'-0"



2
A3.01
**TRANSVERSE SECTION @
NEW ADDITION & FUTURE AUDITORIUM**
1/8" = 1'-0"



3
A3.01
**TRANSVERSE SECTION @
EXISTING KITCHEN**
1/8" = 1'-0"



**BALZER
& ASSOCIATES**
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

Roanoke / Richmond
New River Valley
Shenandoah Valley

www.balzer.cc

80 College Street, Suite H
Christiansburg, VA 24073
540.381.4290



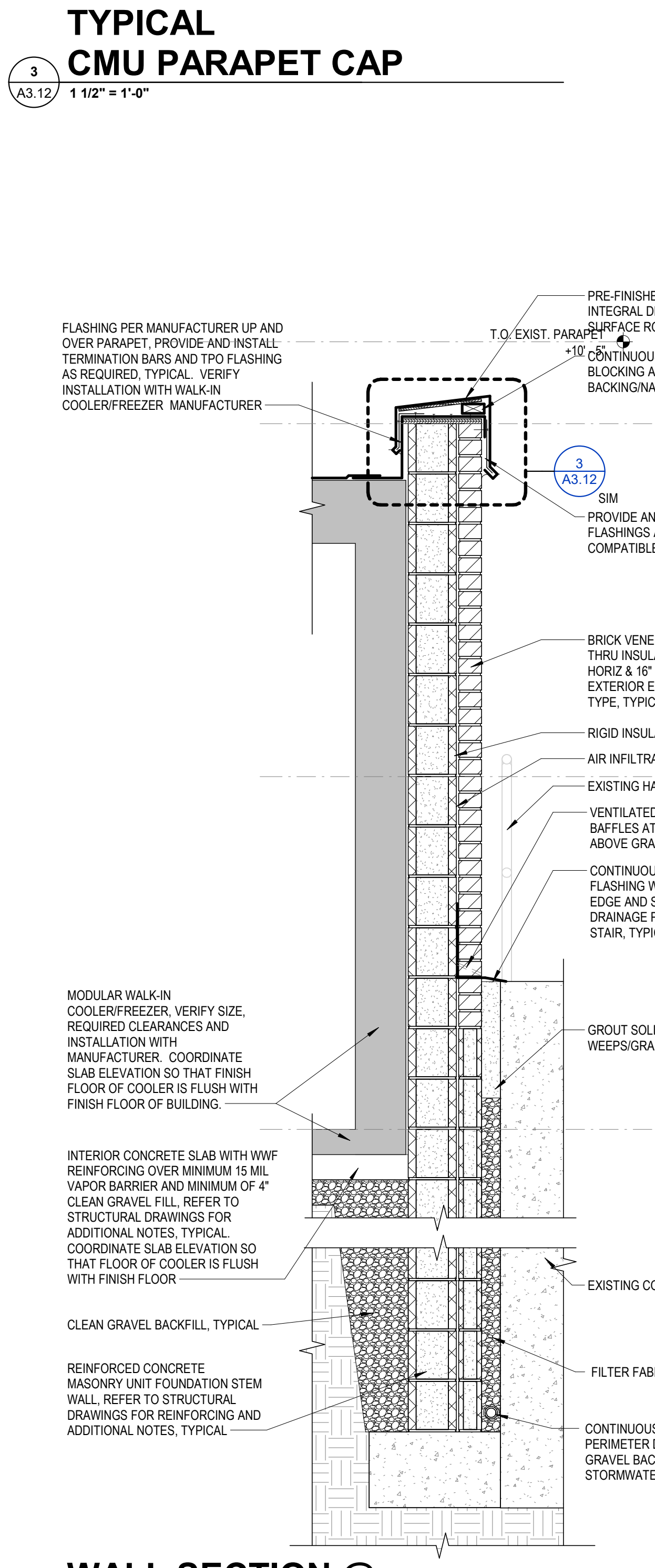
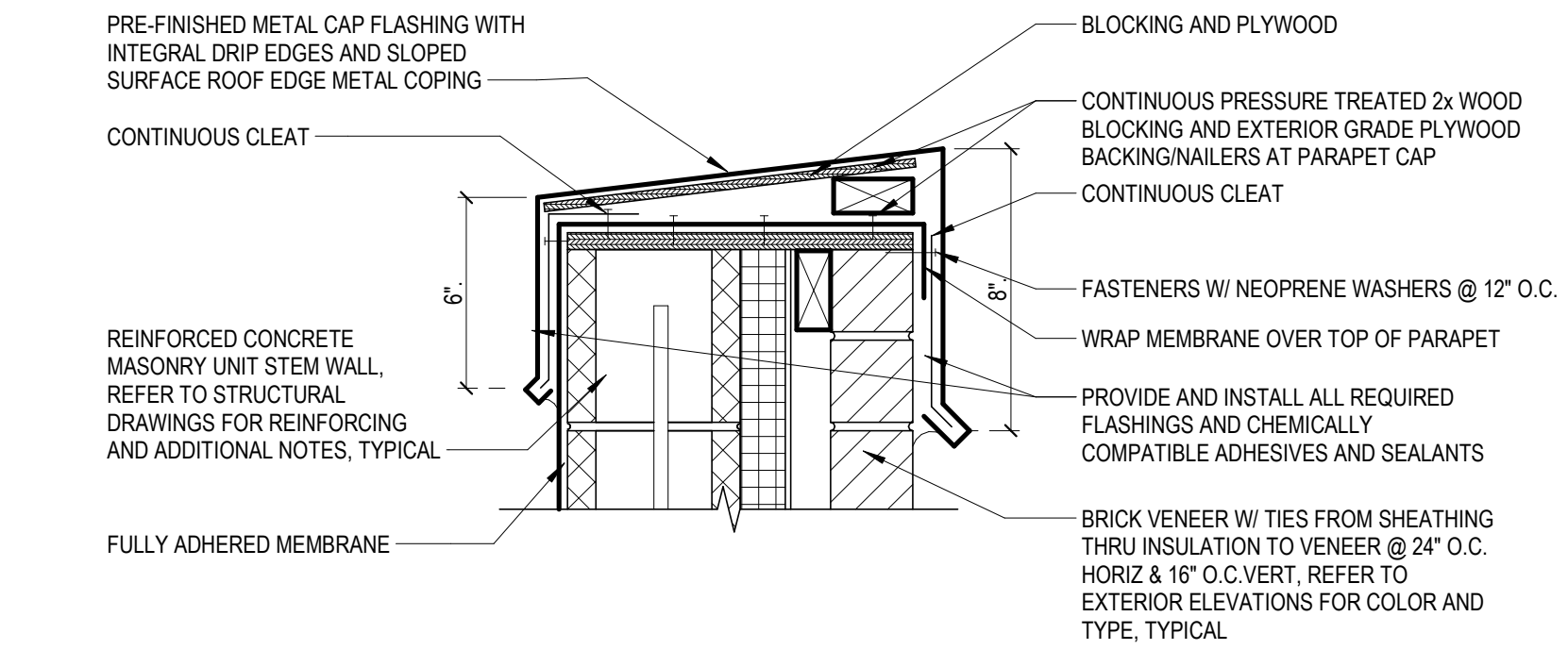
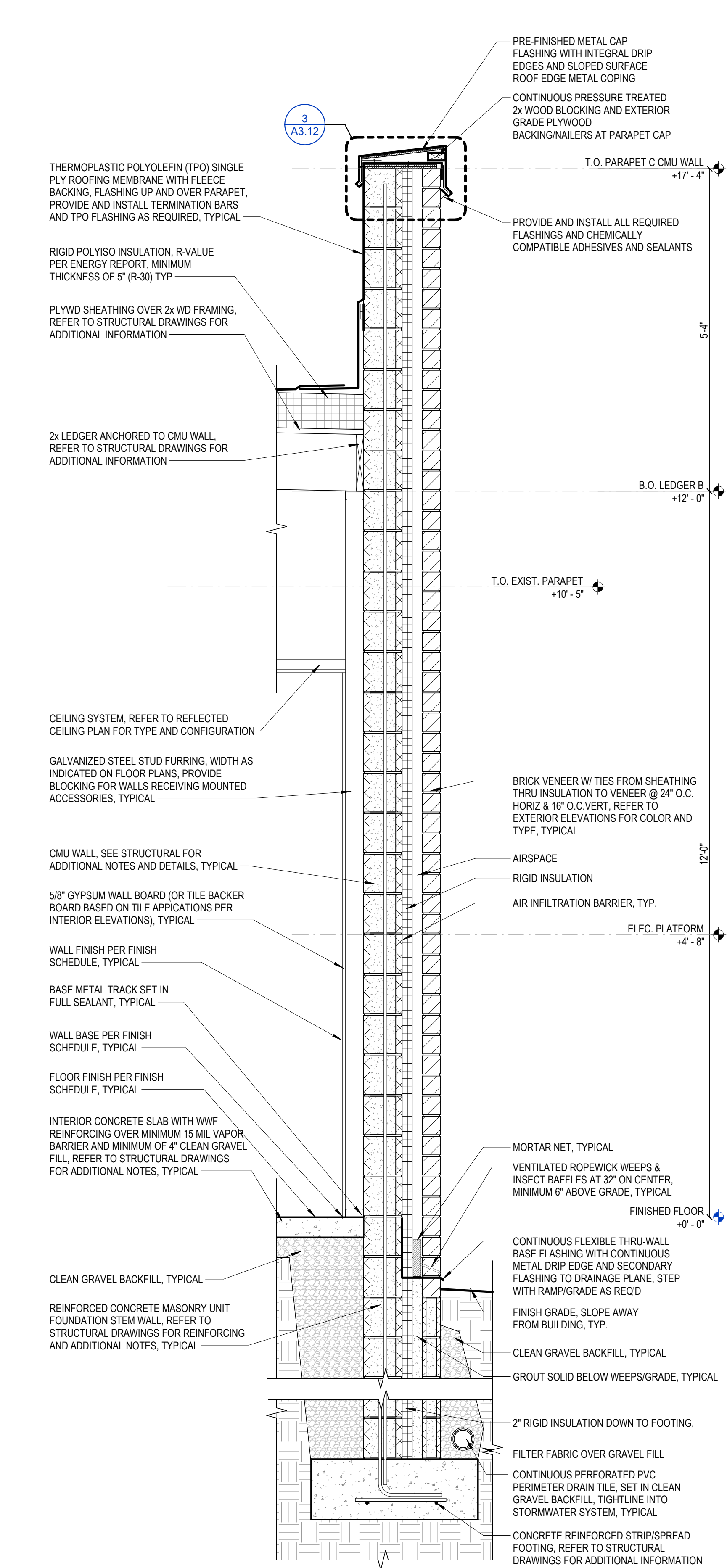
CALFEE CCC PHASE 2
HISTORIC RENOVATION
BUILDING SECTIONS

DRAWN BY ARW/LMC/STC
DESIGNED BY ARW
CHECKED BY ARW
DATE 04/22/2025
SCALE 1/8" = 1'-0"
REVISIONS

1 CORBIN HARMON DRIVE
FOLKSBURG, VIRGINIA 24051

A3.01

PROJECT NO 23220008.00



BALZER & ASSOCIATES
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

Roanoke / Richmond
New River Valley
Shenandoah Valley

www.balzer.cc

80 College Street, Suite H
Christiansburg, VA 24073
540.381.4290



CALFEE CCC PHASE 2
HISTORIC RENOVATION
WALL SECTIONS

DRAWN BY ARW/LMC/STC
DESIGNED BY ARW
CHECKED BY ARW
DATE 04/22/2025
SCALE As indicated
REVISIONS

A3.12
PROJECT NO 23220008.00



Roanoke / Richmond
New River Valley
Shenandoah Valley



| | |
|------------|--------------|
| AWN BY | ARW/LMC/ST |
| SIGNED BY | ARW |
| CHECKED BY | ARW |
| TE | 04/22/202 |
| ALE | As indicated |
| VISIONS | |

A4.01

PROJECT NO 23220008.0

| GRILLE AND DIFFUSER SCHEDULE | | | | | | |
|------------------------------|----------------------|------------------|-------------------------------|----------|--------|--------------------------------------|
| MARK | DESCRIPTION | AIR PATTERN | DAMPER | MATERIAL | FINISH | BASIS OF DESIGN MANUFACTURER & MODEL |
| A | SUPPLY DIFFUSER | 4-WAY | OBD | ALUMINUM | WHITE | PRICE: AMD |
| B | RETURN GRILLE | - | - | ALUMINUM | WHITE | PRICE: EGG CRATE GRILLE |
| C | SUPPLY SLOT DIFFUSER | - | ADJUSTABLE PATTERN CONTROLLER | ALUMINUM | WHITE | PRICE: TBD |
| D | SUPPLY SLOT DIFFUSER | - | ADJUSTABLE PATTERN CONTROLLER | ALUMINUM | WHITE | PRICE: TBD |
| E | SUPPLY SLOT DIFFUSER | - | ADJUSTABLE PATTERN CONTROLLER | ALUMINUM | WHITE | PRICE: TBD |
| F | SUPPLY SLOT DIFFUSER | RADIAL/VERT DOWN | ADJUSTABLE PATTERN CONTROLLER | ALUMINUM | WHITE | PRICE: TBD |
| G | VAV SUPPLY DIFFUSER | 4-WAY | VAV | STEEL | WHITE | PRICE: VPD-HC |

- NOTES:
- TYPE "C" SHALL BE 40 IN. LONG WITH 2x 1/2" SLOTS.
 - TYPE "D" SHALL BE 60 INCHES LONG WITH 2x 1" SLOTS.
 - PROVIDE FILTER FRAME AND MERV 8 DISPOSABLE FILTER FOR ALL TYPE "B" RETURN GRILLES CONNECTED TO SPLIT SYSTEM UNITS.
 - SLOT DIFFUSERS SHALL BE PROVIDED WITH INSULATED SUPPLY AIR PLENUMS.
 - TYPE "E" SHALL BE 48" LONG WITH 2x 1" SLOTS.
 - TYPE "F" SHALL BE 24" LONG WITH 2x 1" SLOTS.

| RTU SCHEDULE- DX COOLING / GAS FIRED | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|--------------|-------------|-----------------|----------------------|--------|------------------------|---------------------------|--------|--------|-------------|-------------|-----|---------------|----------------|--------|--------|------------|----|-------|------|------|------------------|
| MARK | MANUFACTURER | MODEL | SUPPLY AIR FLOW | EXT. STATIC PRESSURE | FAN HP | DX COOLING | | | | | | EER | GAS HEATING | | | | ELECTRICAL | | | | | OPERATING WEIGHT |
| | | | | | | TOTAL COOLING CAPACITY | SENSIBLE COOLING CAPACITY | EAT DB | EAT WB | UNIT LAT DB | UNIT LAT WB | | HEATING INPUT | HEATING OUTPUT | EAT DB | LAT DB | V | PH | HZ | MCA | MOCp | |
| RTU-1 | TRANE | YSJ072A3S0M | 2400 CFM | 0.93 in-wg | 3.1 hp | 76510 Btu/h | 56000 Btu/h | 80 °F | 67 °F | 59 °F | 57 °F | 11 | 120000 Btu/h | 97200.0 Btu/h | 73 °F | 73 °F | 230 V | 3 | 60 Hz | 43 A | 50 A | 1201.00 lb |

- NOTES:
- PROVIDE EACH RTU WITH 14" TALL ROOF CURB
 - PROVIDE EACH RTU WITH DUCT MOUNTED SMOKE DETECTOR IN RETURN DUCT. UNIT OPERATION SHALL HALT UPON DETECTION OF SMOKE.
 - PROVIDE EACH RTU WITH MODULATING HOT GAS REHEAT, DEHUMIDIFICATION CONTROL, AND CONTROLS.
 - PROVIDE EACH RTU WITH MERV 8 AIR FILTER.
 - PROVIDE EACH RTU WITH 120V CONVENIENCE OUTLET.

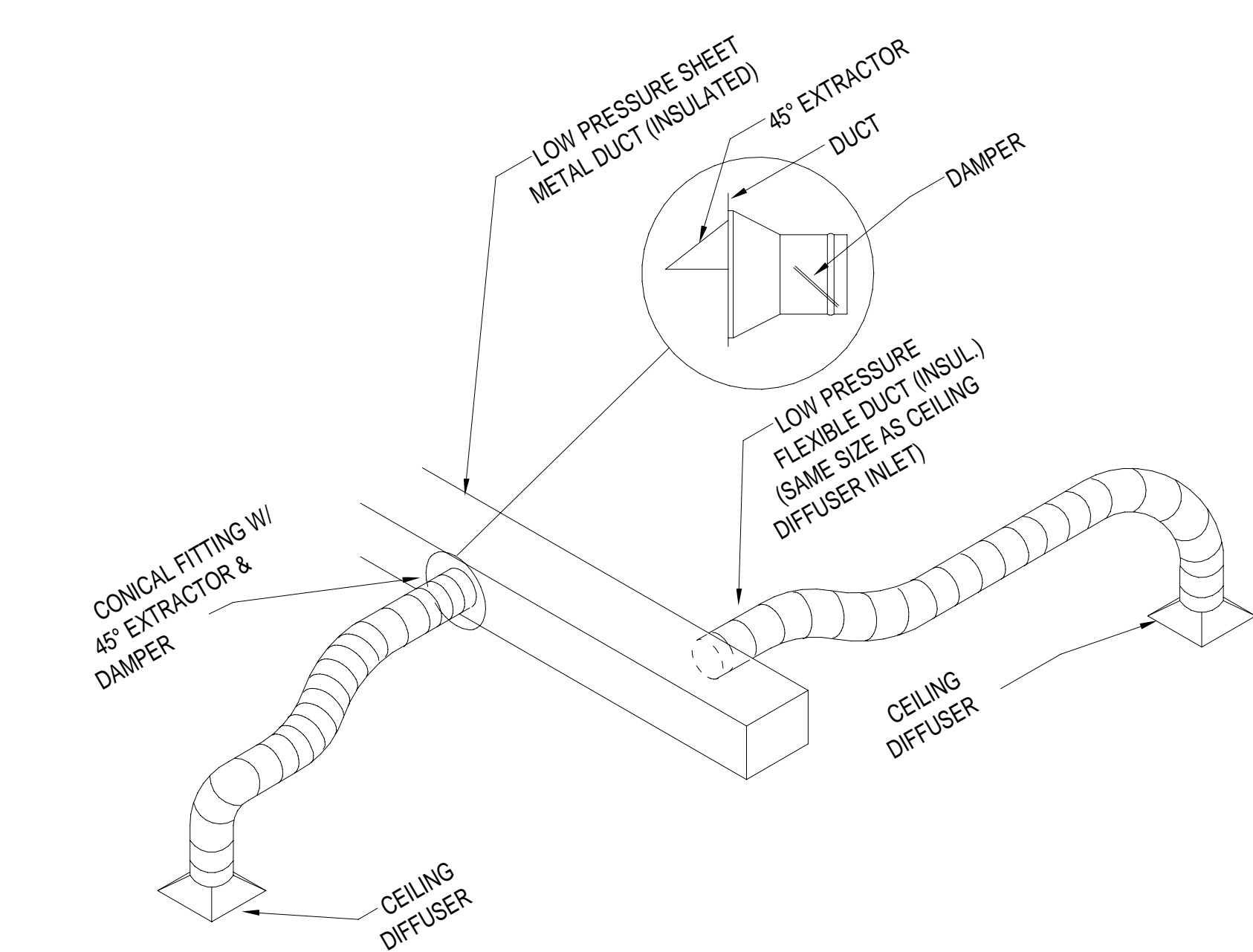
| GAS MAKE UP AIR UNIT SCHEDULE | | | | | | | | | | | | | | |
|-------------------------------|---------------|-------------|-------------|------------------|------------------|--------------------------|--------------------------|------------|---------------|-------------|-----------|--------------|--------------|------------------|
| MARK | AIRFLOW (CFM) | ESP (IN WG) | INPUT (MBH) | HEATING EAT (°F) | HEATING LAT (°F) | COOLING EAT (°F) (DB/WB) | COOLING LAT (°F) (DB/WB) | MOTOR (HP) | MOTOR VOLTAGE | MOTOR PHASE | MCA/MOP | WEIGHT (LBS) | MANUFACTURER | MODEL |
| MUA-1 | 4500 | 0.5 | 286.668 | 17 | 76 | 86 / 71 | 72.1 / 66.1 | 5 | 208 | 3 | 18.8 / 30 | 1568 | CAPTIVEAIRE | A2-D.500-20D-MPU |

| EXHAUST HOOD SCHEDULE | | | | | | | | |
|-----------------------|---------------|------------------|-------------|------------|--------------|-------------|-----------------|-------|
| MARK | AIRFLOW (CFM) | MAX S.P. (IN WC) | LENGTH (IN) | WIDTH (IN) | FRONT HEIGHT | BACK HEIGHT | BASIS OF DESIGN | NOTES |
| H-1 | 3000 | 1.2 | 144 | 76 | 24 | 24 | CAPTIVEAIRE | ALL |
| H-2 | 2100 | 1.2 | 144 | 76 | 24 | 24 | CAPTIVEAIRE | ALL |

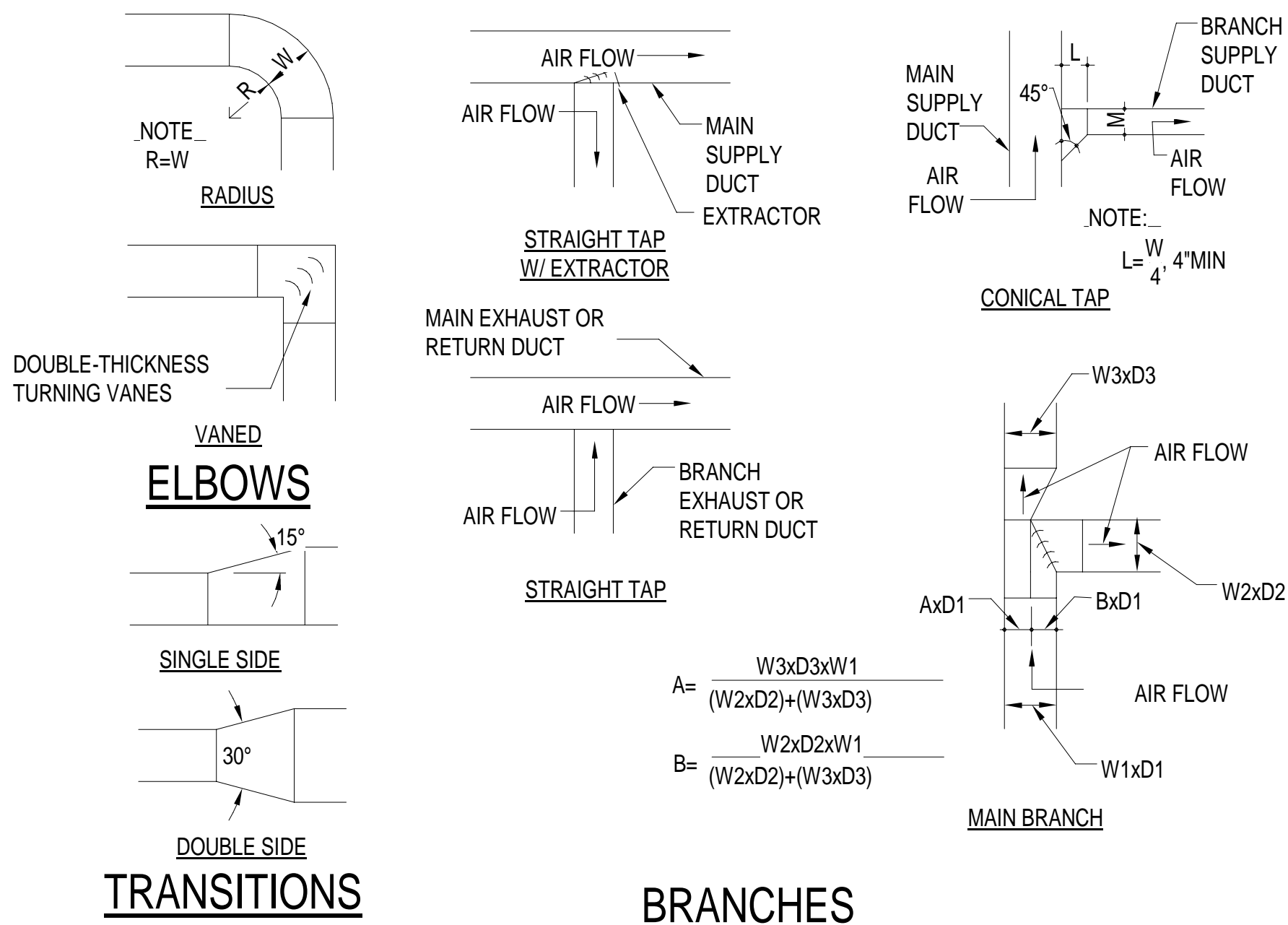
- NOTES:
- THE KITCHEN HOODS, MAKE UP AIR UNIT, AND EXHAUST FANS ARE PROVIDED WITH THE KITCHEN EQUIPMENT PACKAGE AND ARE ALL INSTALLED BY THE MECHANICAL CONTRACTOR. CONTRACTORS SHALL COORDINATE PURCHASE AND INSTALLATION OF EQUIPMENT DURING BIDDING. THE HOODS SHALL BY TYPE 1 WITH FIRE SUPPRESSION. THIS SHALL BE A COMPLETE SYSTEM WITH ALL REQUIRED COMPONENTS AND ACCESSORIES AS REQUIRED.

| EXHAUST FAN SCHEDULE | | | | | | |
|----------------------|----------|--------------|---------|---------------------------|--------|------------------|
| MARK | MODEL | MANUFACTURER | AIRFLOW | STATIC PRESSURE (IN W.C.) | HP (W) | V / HZ / PH |
| EF-11 | DU180HFA | CAPTIVEAIRE | 2580 | 1.2 | 2 | 208-230 / 60 / 3 |
| EF-12 | DU180HFA | CAPTIVEAIRE | 3000 | 1.2 | 2 | 208-230 / 60 / 3 |

- NOTES:
- KITCHEN HOOD EXHAUST FANS (EF-11 & EF-12) SHALL BE INTERLOCKED WITH MAKE UP AIR UNIT (MAU-1) SUPPLY FAN AND BE CONTROLLED BY THE KITCHEN HOOD CONTROLS SYSTEM / HEAT SENSORS.
 - PROVIDE FACTORY MOUNTED DISCONNECT SWITCH.
 - PROVIDE INSULATED ROOF CURB.



1
M102
DETAIL - DIFFUSER CONNECTION
NOT TO SCALE



2
M102
DETAIL - DUCT FITTINGS
NOT TO SCALE



BALZER & ASSOCIATES

PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS
Roanoke / Richmond
New River Valley / Staunton
Harrisonburg / Lynchburg

www.balzer.cc

80 College Street, Suite H
Christiansburg, VA 24073
540.381.4290



CCC PHASE 2
HISTORIC RENOVATION
MECHANICAL SCHEDULES & DETAILS

DRAWN BY JNB
DESIGNED BY JNB
CHECKED BY JNB
DATE 04/22/2025
SCALE 12" = 1'-0"
REVISIONS

1 CORBIN HARRISON DRIVE
POLASKI, VIRGINIA, 24301

M102
PROJECT NO 23220008.00

SCOPE:

INCLUDE ALL MATERIALS, LABOR, TOOLS AND INCIDENTALS NECESSARY TO INSTALL AND BE READY FOR OWNER'S USE COMPLETE SYSTEMS OF HEATING, VENTILATION, AIR CONDITIONING (HVAC), PLUMBING, FOR THE PROPOSED WORK AND BUILDING INNOVATIONS AS SHOWN ON THE DRAWINGS AND CALLED FOR IN THESE SPECIFICATIONS.

ATTEND THE SITE TO OBTAIN DIMENSIONS, EXISTING LAYOUTS AND LOCATIONS AND DETERMINE CONSTRUCTION DETAILS NOT SHOWN ON THESE DRAWINGS.

THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION WITH OTHER DIVISIONS OF THE PROJECT FOR THE FULL EXTENT OF THE SCOPE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL ASPECTS, COMPONENTS, SYSTEMS, ETC. AND ACCOMMODATE THE PERFORMANCE INTENT OF THE CONSTRUCTION DOCUMENTS THROUGHOUT THE PROJECT SCOPE.

BIDDERS RESPONSIBILITY:

STUDY THE DRAWINGS AND SPECIFICATIONS AND VISIT THE WORK SITE. BECOME FAMILIAR WITH THE CHARACTER OF THE WORK, THE COORDINATION WITH OTHER DIVISIONS REQUIRED, AND ANY OTHER CONDITIONS THAT AFFECT THE COMPLETION OF THE WORK. GENERAL CONTRACTOR SHALL BE REQUIRED TO COORDINATE WORK WITH ANY FINISH CONTRACTOR IN A SIDE BY SIDE SCENARIO.

PERMITS, CODES AND LAWS:

COMPLY FOR ALL PERMITS AND PAY ALL FEES.

WORK SHALL BE IN ACCORDANCE WITH LATEST EDITIONS OF THE FOLLOWING RULES AND REGULATIONS, HEREIN REFERRED TO AS "CODES":

LATEST OR ADOPTED EDITION OF THE APPLICABLE LOCAL, STATE, AND FEDERAL BUILDING, MECHANICAL, SANITATION, PLUMBING, ETC. CODES.

INTERNATIONAL FIREWORKER'S LABORATORIES, INC. (I.L.) NATIONAL FIRE PROTECTION ASSOCIATION (N.F.P.A.)

U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (O.S.H.A.)

WHERE ANY OF THESE CODES ARE AT VARIANCE WITH THE DRAWINGS AND SPECIFICATIONS, THEIR REQUIREMENTS SHALL TAKE PRECEDENCE, UNLESS THE DRAWINGS AND SPECIFICATIONS REQUIREMENTS EXCEED THESE CODES. INCLUDE ANY TESTS NECESSARY TO MEET THESE CODES IN THE BID PRICE.

MECHANICAL PLANS:

MECHANICAL PLANS ARE DIAGRAMMATIC AND BASED ON ONE MANUFACTURER'S SYSTEM.

THEY ARE NOT INTENDED TO SHOW EVERY ITEM IN ITS EXACT LOCATION, THE EXACT DIMENSIONS, OR ALL THE DETAILS OF THE EQUIPMENT. VERIFY THE ACTUAL DIMENSIONS OF THE EQUIPMENT PROPOSED TO BE USED.

INSTALLATION SHALL BE WITHIN THE LIMITATIONS IMPOSED BY THE ARCHITECTURAL, STRUCTURAL, HVAC, ELECTRICAL, AND PLUMBING REQUIREMENTS WITH ADEQUATE SPACE FOR MAINTENANCE.

QUESTIONS AND CLARIFICATIONS OF BID DOCUMENTS:

BIDDERS SHALL NOT RELY ON ANY ORAL CLARIFICATION OF THE DRAWINGS OR SPECIFICATIONS. ANY QUESTIONS OR CLARIFICATIONS SHALL BE REFERRED IN WRITING TO THE ARCHITECT.

WARRANTIES:

EQUIPMENT, MATERIALS, AND WORKSMANSHIP SHALL BE GUARANTEED IN WRITING FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE. WARRANTIES SHALL BE IN WRITING AND SHALL INCLUDE FACTORY WARRANTIES FOR EACH PIECE OF EQUIPMENT. PROVIDE A CERTIFICATE FOR EACH PIECE OF EQUIPMENT. CLEARLY INDICATE ON EACH WARRANTY CERTIFICATE THE MODEL NO., SERIAL NO., LOCATION, AND OWNER'S NAME.

COMPLETE SYSTEM:

PRODUCTS, MATERIALS AND ACCESSORIES SHALL BE FURNISHED AND INSTALLED AS REQUIRED FOR A COMPLETE SYSTEM READY FOR OWNER'S BENEFICIAL USE.

WORKSMANSHIP:

WORK SHALL BE PERFORMED BY COMPETENT MECHANICS USING PROPER TOOLS AND EQUIPMENT TO PRODUCE FIRST QUALITY WORK. ALL WORK SHALL BE NEATLY INSTALLED, ACCESSIBLE FOR MAINTENANCE, AND COMPLETE WITH ALL ACCESSORIES REQUIRED.

ACCESSIBILITY:

INSTALL ALL EQUIPMENT AND THEIR APPURTENANCES SUCH AS, BUT NOT LIMITED TO, VALVES, COILS, DRAIN PANS, DRAINS, DAMPERS, CONTROLS, MOTORS, CONTROLLERS, ETC., SO THAT THEY CAN BE SERVICED, RESET, REPLACED OR RECALIBRATED, ETC. INSTALL ALL NECESSARY ACCESS PANELS AND BUILDING ACCESS DOORS, AS BELOW, WHERE REQUIRED TO ACCOMPLISH THIS. IF ANY EQUIPMENT OR COMPONENTS DO NOT FIT WHERE INTENDED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING, REQUESTING FURTHER GUIDANCE.

PROVIDE BUILDING ACCESS DOORS FOR ALL MECHANICAL EQUIPMENT REQUIRING SERVICE, INCLUDING BUT NOT LIMITED TO, AHU'S, FANS, DAMPERS, DUCT ACCESS PANELS, CONTROLS, PIPING, VALVES, REGULATORS, TRAPS, ETC., INSTALLED ABOVE AND BELOW CEILINGS, BEHIND WALLS, AND BELOW FLOORS, FOR INSTALLATION BY OTHER DIVISIONS OF THE WORK. BUILDING ACCESS DOORS ARE NOT REQUIRED WHERE THE MECHANICAL EQUIPMENT IS INSTALLED ABOVE LAY-IN AND ACCESSIBLE SPLINE CEILINGS. OTHER TYPES OF SPLINE CEILINGS REQUIRE BUILDING ACCESS DOORS.

WHERE THE BUILDING ACCESS DOORS FOR THE USE INTENDED, BUT NOT LESS THAN 12 INCHES BY 12 INCHES. WHERE HUMAN ACCESS IS REQUIRED, PROVIDE 24 INCHES BY 24 INCHES, OR LARGER.

WHERE BUILDING ACCESS DOORS CANNOT BE INSTALLED FOR STRUCTURAL OR ARCHITECTURAL REASONS, NOTIFY THE ARCHITECT.

REMOVE COAT BUILDING ACCESS DOORS IN PAINTED AREAS WITH FINISH PAINTING AS SPECIFIED IN OTHER DIVISIONS.

KEYED AREAS, TOILET ROOMS, OR AREAS WITH CERAMIC TILE FLOORS OR WALLS, PROVIDE STAINLESS STEEL BUILDING ACCESS DOORS.

PROVIDE BUILDING ACCESS DOORS WITH A CONCEALED KEY OPERATED LOCK AND CONCEALED HINGES. ALL LOCKS SHALL BE KEYED ALIKE.

PROVIDE BUILDING ACCESS DOORS AS SPECIFIED IN OTHER DIVISIONS OF THE WORK OR PROVIDE MILCOR DOORS, OR EQUIVALENT, SUITABLE FOR THE INSTALLATION INTENDED.

PROVIDE FIRE RATED DOORS FOR ALL FIRE RATED WALLS, PARTITIONS, AND CEILINGS.

WORK BY OTHER TRADES:

FINISH ALL SLEEVE FRAMES, BUILDING ACCESS DOORS, PREFABRICATED EQUIPMENT CURBS, ROOF CURBS, ETC. FOR INSTALLATION BY OTHER TRADES.

INSTALL ALL MOTORS AND FURNISH THE STARTING EQUIPMENT AND DISCONNECTS TO DIVISION 26000 SUBCONTRACTOR FOR INSTALLATION. CONTROL WIRING, INCLUDING THERMOSTATS, INTERLOCKS, ETC. SHALL BE FURNISHED BY DIVISION 23000. BE SURE THAT THE ELECTRICAL EQUIPMENT MOUNTED NEAR THE MECHANICAL EQUIPMENT DOES NOT BLOCK ACCESS TO SERVICE AREAS OF THE MECHANICAL EQUIPMENT. DO NOT ALLOW ANY EQUIPMENT TO BE INSTALLED ON THE HVAC EQUIPMENT ENCLOSURES.

FIRE STOPPING:

INfiltrations OF FLOORS AND OTHER FIRE-RATED ASSEMBLIES SHALL BE FIRE AND SMOKE-STOPPED IN STRICT ACCORDANCE WITH THE APPLICABLE CODES.

FOUNDATIONS AND SPECIAL SUPPORTS:

FINISH AND INSTALL ALL SPECIAL FOUNDATIONS AND SUPPORTS REQUIRED FOR EQUIPMENT INSTALLED UNDER THIS SECTION, UNLESS THEY ARE A PART OF THE BUILDING STRUCTURE AND ARE SHOWN IN OTHER SECTIONS.

13. **CLEANING AND PAINTING:**
THOROUGHLY CLEAN ALL EQUIPMENT AND REMOVE ALL TRASH, CARTONS, ETC. MAKE ANY NECESSARY CORRECTIONS OR REPAIR/REPLACE ANY DAMAGED MATERIALS OR EQUIPMENT. LEAVE THE ENTIRE SYSTEM IN A THOROUGHLY CLEAN AND ORDERLY MANNER.

ANY FINISHED SURFACES THAT HAVE BEEN SCRATCHED OR DISCOLORED SHALL BE TOUCHED-UP OR REPAINTED BREAK TO BREAK WITH PAINT TO MATCH THE ORIGINAL COLOR. TOUCH UP PAINTED SURFACES OR REPAINT THE ENTIRE PAINTED SURFACE IF TOUCH UP IS UNACCEPTABLE. SEE ARCHITECTURAL PAINTING SPECIFICATIONS. ALL METAL ITEMS SUBJECT TO RUSTING, INSIDE OR EXPOSED TO WEATHER SHALL BE GIVEN ONE COAT OF PROPER TYPE RUST PREVENTATIVE PRIMER AS SOON AS INSTALLED. APPLY TWO FINISH COATS WITH COLOR TO BE SELECTED BY THE ARCHITECT.

FOR ALL INTERIOR OR EXTERIOR STRUCTURAL GALVANIZED STEEL, COLD GALVANIZE ALL EXPOSED METAL CUT ENDS, HOLES, WELDS, SCRATCHES, ETC., OR HOT DIP GALVANIZE THE ENTIRE STRUCTURE OR FRAME AFTER FABRICATION AND MOUNTING HOLES ARE CUT.

UPON COMPLETION OF THE INSTALLATION, BUT NOT BEFORE, AND BEFORE ACCEPTANCE, THOROUGHLY CLEAN ALL EXPOSED EQUIPMENT, PIPING, DUCTWORK, INSULATION JACKETS, ETC., REMOVING ALL STICKERS, LABELS, MARKING, WRITING, FABRICATION MARKINGS, IDENTIFICATION, ADHESIVE, SEALER, GLUE, RUST, CORROSION, ETC., FROM THEIR EXTERIOR SURFACES.

THE CLEANLINESS AND PAINTING ACCEPTABILITY IS AT THE SOLE DISCRETION OF THE ARCHITECT AND MAY REQUIRE ADDITIONAL CLEANING AND COATS OF PAINT BEFORE ANY SURFACE IS ACCEPTED.

14. **SUBMITTAL AND SHOP DRAWINGS:**
SUBMIT MANUFACTURER'S CERTIFIED DATA RELATIVE TO ALL EQUIPMENT, PIPING, CONTROLS, ETC. REQUIRED FOR THE INSTALLATION OF THE HVAC, PLUMBING AND FIRE PROTECTION SYSTEMS. SUBMIT FOR REVIEW ALL NECESSARY ENGINEERING, PRODUCT AND INSTALLATION DATA, SHOP DRAWINGS, SAMPLES ETC. FOR ALL EQUIPMENT, MATERIAL, AND SYSTEMS TO ASCERTAIN COMPLIANCE WITH THE TECHNICAL REQUIREMENTS OF THE CONTRACT DOCUMENTS.

SUBMIT SIX (6) COPIES OF ALL NECESSARY DATA, CUTS, MANUFACTURER'S SELECTIONS, CATALOGS, BULLETINS, INSTALLATION INSTRUCTIONS, DRAWINGS, DIAGRAMS, CURVES, ETC. CLEARLY INDICATE ON THE SUBMITTED DATA, THE MANUFACTURER'S NAME, PRODUCT NUMBER(S), OPTIONS, EQUIPMENT CAPACITY, DIMENSIONAL DATA, WEIGHTS, AND OTHER APPLICABLE TECHNICAL DATA FOR THE PROJECT.

TRADE NAMES, MANUFACTURERS, AND CATALOGUE NUMBERS ARE MENTIONED HEREIN AND ON THE DRAWINGS SOLELY IN ORDER TO ESTABLISH A STANDARD FOR THE TYPE, GENERAL DESIGN, AND QUALITY OF PRODUCT REQUIRED. OTHER PRODUCTS SIMILAR IN DESIGN OF EQUIVALENT QUALITY CAPABLE OF FITTING WITHIN THE SPACES ALLOTTED AND COMPLYING WITH THE DRAWINGS AND SPECIFICATIONS WILL BE CONSIDERED AFTER THE CONTRACT IS LET UNLESS "PRIOR APPROVAL" REQUIREMENTS ARE SET FORTH IN THESE DOCUMENTS.

WHERE TWO OR MORE MANUFACTURERS OR MATERIALS ARE NAMED, THE CONTRACTOR MAY SUBMIT ANY OF THOSE NAMES, PROVIDED THEY CONFORM TO THE SPECIFICATIONS AND DESIGN INTENT. CONTRACTOR SHALL INCLUDE WITH THE SUBMITTAL A LIST OF ALL COMPARATIVE FEATURES INDICATING COMPLIANCE WITH THE SPECIFICATIONS.

THE ARCHITECT AND/OR ENGINEER MAY REQUIRE THE SUBMISSION OF SAMPLES, PARTICULARLY WHEREVER EQUIPMENT OR APPLIANCES ARE VISIBLE IN FINISHED AREAS, SUCH AS CEILINGS, INTERIOR AND EXTERIOR WALLS. THE CONTRACTOR AND SUPPLIER SHALL ARRANGE FOR DEMONSTRATIONS OF THE INSTALLATION OF ANY OF THESE PRODUCTS AND THEIR ABILITY TO PERFORM AS SPECIFIED, IF REQUIRED.

REVIEW OF SUBMITTALS AND SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR FITTING THE EQUIPMENT IN THE SPACE ALLOTTED WITH SPACE FOR ALL CONNECTIONS AND SERVICING AND FOR THE COORDINATION OF THE WORK WITH WORK OF OTHER TRADES.

THE CONTRACTOR SHALL REVIEW ALL SUBMITTALS AND SHOP DRAWINGS AND INDICATE BY STAMP OR LETTER THAT HE HAS REVIEWED THEM, BEFORE FORWARDING THEM TO THE ARCHITECT AND/OR ENGINEER. SUBMITTALS AND DRAWINGS WILL BE RETURNED AFTER REVIEW INDICATING WHETHER EXCEPTIONS ARE TAKEN, THE SUBMITTAL RETURNED WITH CORRECTIONS, OR IS COMPLETELY REJECTED. RESUBMISSION OF REVISED SUBMITTALS AND SHOP DRAWINGS, IF REQUIRED, SHALL BE DONE BEFORE INSTALLATION AND CONSTRUCTION IS BEGUN.

CORRECTIONS OR COMMENTS MADE ON THE SUBMITTALS AND DRAWINGS DURING THIS REVIEW DOES NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THIS REVIEW IS FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, FABRICATION PROCESSES, TECHNIQUES OF CONSTRUCTION, COORDINATING THE WORK WITH THAT OF ALL OTHER TRADES, AND PERFORMING WORK IN A SAFE AND SATISFACTORY MANNER. REVIEW OF THE SUBMITTALS SHALL NOT PERMIT ANY DEVIATION FROM PLANS AND SPECIFICATIONS.

SUBMITTALS FOR A SPECIFIC CLASS OF PRODUCTS, SYSTEMS, INSTALLATION PROCEDURES, SHOP DRAWINGS, ETC. WILL BE REVIEWED BY THE ENGINEER ONE TIME AND ITS RESUBMITTAL ONE TIME, IF NECESSARY, AS ABOVE, AT NO COST TO THE CONTRACTOR. THE CONTRACTOR WILL BEAR THE FULL COST FOR ALL SUBSEQUENT RESUBMITTAL REVIEWS AT THE ENGINEER'S STANDARD HOURLY RATES. PAYMENT WILL BE REQUIRED AT COMPLETION OF RESPECTIVE REVIEW.

REQUIRED SHOP DRAWINGS:

SUBMIT THE FOLLOWING SHOP DRAWINGS BEFORE ANY MECHANICAL DUCTWORK, PIPING, EQUIPMENT, ETC. IS FABRICATED AND INSTALLED. SUBMIT THESE SHOP DRAWINGS IN 1/4" INCH PER FOOT MINIMUM SCALE WITH NECESSARY PLANS, ELEVATIONS, SECTIONS, DETAILS, AND ISOMETRICS. SUBMIT SIX (6) PAPER COPIES AND ONE (1) CD-ROM WITH ALL THESE DRAWINGS IN AUTOCAD DRAWING DWG FILES, LATEST AUTOCAD FORMAT.

SOON AFTER AWARD OF THE CONTRACT, DETERMINE WHERE THERE MAY BE INSTALLATION, SPACE CONCERNS, AND/OR WHERE OTHER CONFLICTS MAY OCCUR. SUBMIT COORDINATION DRAWINGS, RELATING TO THESE CONFLICTS WITH THE MECHANICAL EQUIPMENT, DUCT, PIPING, ELECTRICAL, STRUCTURAL AND ARCHITECTURAL SYSTEMS ETC., SHOWING CLEARANCES AND RELATIONSHIP TO STRUCTURAL MEMBERS, PIPING, LIGHTS, CONDUITS, ELECTRICAL EQUIPMENT, AND BUILDING COMPONENTS. IN PREPARING THESE SHOP DRAWINGS, ESTABLISH LINES AND LEVELS FOR ALL DIVISIONS OF THE WORK IN THE AFFECTED AREA. IMMEDIATELY CALL TO THE ATTENTION OF THE ARCHITECT ANY INTERFERENCE OR CONFLICT FOR CLARIFICATION IN WRITING.

SUBMIT SHOP DRAWINGS FOR ALL DUCTWORK.

SUBMIT LAYOUT DRAWINGS OF EACH MECHANICAL SYSTEM SHOWING THE LOCATION, ARRANGEMENT, ETC. OF ALL EQUIPMENT, ALL TRADES, ETC. TO BE INSTALLED RELATED TO THE RESPECTIVE SYSTEM.

15. AS-BUILT DRAWINGS:

MAINTAIN DAILY UPDATED DRAWINGS SHOWING DEVIATIONS FROM CONSTRUCTION DOCUMENTS. AT THE END OF THE PROJECT, PROFESSIONALLY PREPARE AS-BUILT DRAWINGS AND SUBMIT THREE COPIES, ONE REPRODUCIBLE.

16. OPERATION AND MAINTENANCE MANUALS:

UPON COMPLETION OF THE PROJECT, SUBMIT THREE COPIES OF ALL OPERATION AND MAINTENANCE MANUALS, WARRANTIES, SPARE PARTS LIST, AS-BUILT DRAWINGS, TEST AND BALANCE REPORTS, AND LETTER OF GUARANTEE ALL BOUND IN THREE RING BINDERS, CLEARLY SHOWING WHICH EQUIPMENT WAS SUPPLIED TO THE JOB.

1. PROJECT COMPLETION:
BEFORE STARTING AND TESTING ANY SYSTEM, HVAC, OR PLUMBING, TO PREVENT INADVERTENT OPERATION OF THE MECHANICAL EQUIPMENT BEFORE THE MANUFACTURER'S INSPECTION AND TESTING, THE CONTRACTOR SHALL:
VERIFY THAT ALL ELECTRICAL POWER IS OFF TO ALL MECHANICAL EQUIPMENT, INCLUDING THE AHU'S, ACCU'S, BOOSTER PUMPS, FIRE PUMPS, ETC.
LOCK OUT EACH SYSTEM USING SETON MODEL NUMBER 70329: "DO NOT OPERATE" LOCK ON LOCKOUT TAGS, OR EQUIVALENT. INSTALL LOCKOUT TAGS AT EACH PIECE OF EQUIPMENT, ELECTRICAL DISCONNECTS, STARTERS, SWITCHES, ETC.
REMOVE THESE TAGS ONLY WHEN THE MANUFACTURER APPROVES OF THE EQUIPMENT INSTALLATION IN WRITING.
EACH MANUFACTURER OR THEIR REPRESENTATIVE SHALL INSPECT THEIR EQUIPMENT FOR COMPLIANCE TO THEIR INSTALLATION REQUIREMENTS AND RECOMMENDATIONS.
IN ADDITION, THE COMPRESSOR MANUFACTURER SHALL INSPECT EACH REFRIGERANT PIPING INSTALLATION FOR ADHERENCE TO THE APPROVED REFRIGERANT PIPING DIAGRAMS, ROUTING.
EACH MANUFACTURER SHALL PREPARE A PUNCH LIST OF ALL DEFICIENCIES, IN WRITING WITH COPIES TO THE ARCHITECT AND CONTRACTOR.
EACH MANUFACTURER SHALL REINSPECT THE EQUIPMENT AFTER THE CONTRACTOR HAS CORRECTED ALL DEFICIENCIES.
WHEN THE MANUFACTURER HAS GIVEN THEIR WRITTEN APPROVAL WITH COPIES TO THE ARCHITECT AND CONTRACTOR, THE CONTRACTOR MAY REMOVE THE LOCKOUT TAGS, SAFELY START, AND TEST THE EQUIPMENT, AS REQUIRED HEREIN.
CONTRACTOR SHALL PROVIDE FOR ALL NECESSARY DRILLING OF WALL STUDS, CEILING JOISTS, PLATES, FINISHES, ETC. TO ACCOMMODATE ROUTING AND INSTALLATION OF ALL PIPING, DUCT, ETC.
HVAC EQUIPMENT, METHODS AND MATERIALS

18. DUCTWORK GENERAL:
DUCT SIZES SHOWN ON THE DRAWINGS ARE INSIDE DIMENSIONS AND DO NOT TAKE INTO ACCOUNT LINING THICKNESS. DUCTWORK SHALL BE GALVANIZED SHEET METAL WITH GAUGES, CONSTRUCTION DETAILS AND INSTALLATION ACCORDING TO N.F.P.A. STANDARD 90A, ASHRAE, AND SMACNA DUCT CONSTRUCTION MANUALS AND REQUIREMENTS.
PROVIDE FLEXIBLE CONNECTIONS AT AIR HANDLING UNITS AND FANS.
PROVIDE SINGLE THICKNESS TURNING VANES IN ELBOWS.
PAINT DUCTS, SLEEVES, PLENUMS, ETC., INTERIORS VISIBLE THROUGH AIR DEVICES WITH A MINIMUM OF ONE COAT OF PROPER TYPE RUST PREVENTATIVE PRIMER, SUITABLE FOR GALVANIZED STEEL, AND TWO FINISH COATS OF FLAT BLACK PAINT.

19. DUCT CONSTRUCTION MATERIALS:
RECTANGULAR SUPPLY, RETURN, OUTSIDE AIR, AND EXHAUST: LINED GALVANIZED SHEET METAL. ROUND DUCT AND RUN-OUTS: EXTERNALLY INSULATED GALVANIZED SHEET METAL DUCTS WITH SPIRAL LOCK SEAMS. FLEXIBLE DUCT: PRE-INSULATED FLEXIBLE DUCT. NO FLEXIBLE DUCT RUNS LONGER THAN 5 FEET.
PROVIDE DRYER VENT PIPING INSTALLED AS REQUIRED BY THE MANUFACTURER AND PER CODE USING 4 INCH ROUND GALVANIZED STEEL SEALED AND SUPPORTED. THE USE OF FLEXIBLE DRYER VENT PIPE IS PROHIBITED.

20. FABRICATION, ERECTION, AND SUPPORT:
ALL DUCTWORK SHALL BE FABRICATED, ERECTED, BRACED, AND SUPPORTED IN STRICT ACCORDANCE WITH THE LATEST EDITIONS OF SMACNA AND ASHRAE REQUIREMENTS.

21. ACOUSTIC LINED DUCTWORK:
ACOUSTICALLY AND THERMALLY LINE 10' OF RECTANGULAR SUPPLY, RETURN, OUTSIDE AIR, AND EXHAUST DUCT AND PLENUMS WITH 1" THICK, 1 1/2 PCF FIBERGLASS DUCT LINER, APPLIED PER THE MANUFACTURER'S AND NAIMA REQUIREMENTS. DUCT LINER SHALL MEET AND/OR EXCEED ASHRAE'S I.A.Q. STANDARD 62. USE WELDED STITCH CLIPS, IN LIEU OF ADHESIVE TYPE FASTENERS AND FULL COVERAGE ADHESIVE. PROVIDE EDGE NOSINGS WHERE REQUIRED. COAT ALL EXPOSED FIBERGLASS WITH HARDCAST "LAG-GRIP 671".

22. JOINT SEALING:
SEAL ALL DUCT JOINTS AND SEAMS (LONGITUDINAL AND TRANSVERSE) WITH HIGH PRESSURE DUCT SEALER, HARDCAST "IRON-GRIP 601" OR APPROVED EQUIVALENT. REINFORCED FOIL BACKED TAPES, CLOTH OR PLASTIC BACKED TAPES (DUCT TAPE) ARE NOT ACCEPTABLE.

23. FLEXIBLE AIR DUCT:
DUCT SHALL BE UL LISTED UL-181, CLASS I AIR DUCT MATERIAL AND SHALL COMPLY WITH N.F.P.A 90A AND 90B AND ALL LOCAL REQUIREMENTS. DUCT SHALL HAVE AN OPERATING AIR PRESSURE OF 6 INCHES WG POSITIVE AND 4 INCHES WG NEGATIVE. ACOUSTICAL DOUBLE LAMINATED INNER FABRIC BONDED TO A STEEL HELIX WIRE. OUTER JACKET FIRE RETARDANT REINFORCED ALUMINUM MYLAR WITH FIBERGLASS INSULATION. FLEXMASTER TYPE "BM" ACOUSTICAL INSULATED OR EQUIVALENT.
MAKE ALL FLEXIBLE DUCT CONNECTIONS TO HARD DUCT USING STAINLESS STEEL SCREW CLAMPING BANDS AND SEALED AIR TIGHT WITH HIGH PRESSURE DUCT SEALER. PLASTIC BANDS ARE NOT ACCEPTABLE.
SEAL FLEXIBLE DUCT VAPOR BARRIER TO HARD DUCT AND/OR ADJACENT INSULATION. NO EXPOSED FIBERGLASS SHALL BE VISIBLE.

24. AIR DISTRIBUTION DEVICES:
COORDINATE THE EXACT LOCATIONS OF ALL AIR DEVICE NEEDS WITH THE ARCHITECTURAL DRAWINGS PRIOR TO INSTALLATION. COORDINATE THE EXACT LOCATION OF EACH OUTLET WITH THE ARCHITECT WITH REGARD TO CEILING AND WALL SPACING, CENTERING ALONG SOFFITS, WALLS, ETC. FURNISH AND INSTALL WHERE SHOWN ON THE DRAWINGS ALL DIFFUSERS, GRILLES, AND REGISTERS OF THE SIZE, TYPE, AND CAPACITY AS INDICATED IN THE AIR DEVICE SCHEDULE.

ELBOWS:
25. TURNING VANES AND SMOOTH RADIUS ELBOW (WITHOUT VANES):
AT ALL DUCT TURNS OF 45 DEGREES OR MORE, PROVIDE SINGLE THICKNESS TURNING VANES PER SMACNA REQUIREMENTS.
ALTERNATIVELY, USE SMOOTH RADIUS ELBOW (R/W = 1.5).

26. BRANCH TAKEOFF FITTINGS:
AT ALL MAIN TO BRANCH DUCT TAPS, TAKEOFFS, OR RUN-OUTS, PROVIDE 45 DEGREE ENTRANCE TAPS, AS DETAILED BY SMACNA STANDARDS.

27. DUCT MOUNTED ACCESS PANELS:
INSTALL ACCESS PANELS AS FOLLOWS:
AT INLET OF EACH DUCT MOUNTED FIRE AND MOTORIZED DAMPER.
FOR DUCT MOUNTED CONTROLS.
AS REQUIRED AND DIRECTED BY THE TEST AND BALANCE CONTRACTOR.
WHERE REQUIRED FOR DUCT INSPECTION, MAINTENANCE, AND CLEANING.
ACCESS PANELS SHALL BE 18 INCHES X 18 INCHES OR LARGEST DUCT WILL
ALLOW. NORMALLY CENTER THE ACCESS PANEL IN THE BOTTOM OF THE DUCT
AS CLOSE AS POSSIBLE TO THE DUCT MOUNTED DEVICE. ACCESS PANELS MAY
BE INSTALLED ON THE SIDE OF THE DUCT, WHERE NECESSARY.
ACCESS PANELS SHALL BE DOUBLE WALL INSULATED HINGED WITH NEOPRENE
GASKETS AND CAM LOCKS ON EACH UNHINGED SIDE. WHERE REQUIRED
BECAUSE OF PANEL OPENING CLEARANCE, SUBSTITUTE UNHINGED ACCESS
PANELS WITH CAM LOCKS ON EACH SIDE AND CAPTIVE CHAIN. ACCESS PANELS
SHALL BE FLEXMASTER "TBSM-TAB DOOR" GREENHECK MODEL "HAD-10", OR
EQUIVALENT.

28. REFRIGERANT PIPING:
REFRIGERANT PIPING SHALL CONFORM TO THE REQUIREMENTS OF THE SAFETY
CODES FOR MECHANICAL REFRIGERATION AND REFRIGERANT PIPING AND THE
MANUFACTURER REQUIREMENTS.
RUN ALL PIPING SQUARE TO BUILDING LINES WHEREVER POSSIBLE. FIELD
ROUTE PIPING IN ORDER TO PROVIDE FOR EASE OF ACCESS TO VALVES AND
OTHER APPURTENANCES.
SUPPORT INTERIOR PIPING FROM THE BUILDING STRUCTURE USING COPPER OR
PVC COATED HANGERS. SUPPORT REFRIGERANT PIPING 4 FOOT ON CENTER
AND AT EACH CHANGE OF DIRECTION. PROVIDE 4" WIDE INSULATION SADDLES.
SUBMIT REFRIGERANT PIPING LAYOUT SHOP DRAWINGS FOR EACH UNIQUE
SYSTEM, REVIEWED AND APPROVED BY THE MANUFACTURER, IN WRITING.
SHOW ALL FILTERS, DRIERS, SIGHT-GLASSES, VALVES, ETC. AS REQUIRED BY
THE MANUFACTURER.

USE REFRIGERANT GRADE, TYPE "K" HARD DRAWN COPPER PIPE WITH LONG
RADIUS ELBOWS. NO CAST FITTINGS ARE ACCEPTABLE.
INSTALL FILTER DRIER EQUIVALENT TO SPORLAN CATCH-ALL.
INSTALL SIGHT GLASSES WITH MOISTURE INDICATORS COVERED BY A
PROTECTIVE CAP. LOCATE THE SIGHT GLASSES INSIDE THE BUILDINGS, CLOSE
TO THE FAN COIL IN THEIR RESPECTIVE MECHANICAL CLOSETS.
PROVIDE EXTERNAL FRONT SEATED BRASS SERVICE VALVES WITH SWEAT
CONNECTIONS, WITH SERVICE PORTS FOR CHECKING OPERATING REFRIGERANT
PRESSURES.
COPPER SHALL BE CLEANED AND SHINED BEFORE BRAZING. BRAZE USING J.W.
HARRIS "DYNAFLOW" 6% SILVER BRAZING ALLOY.
PIPING SHALL BE PURGED WITH DRY NITROGEN WHILE BRAZING TO PREVENT
OXIDATION. UPON COMPLETION OF A WELD, THE WELD SHALL BE WIPED WITH A
DAMP RAG TO REMOVE FLUX WHILE STILL HOT.
ALL PIPING SHALL BE TESTED FOR 24 HOURS IN ACCORDANCE WITH THE
FOLLOWING SCHEDULE AND PROVEN TIGHT:
DISCHARGE AND LIQUID REFRIGERANT PIPING--300 PSIG, NITROGEN.
SUCTION REFRIGERANT PIPING--150 PSIG NITROGEN.
REFRIGERANT PIPING, AFTER PROVEN TIGHT, SHALL BE EVACUATED BY MEANS
OF AN APPROVED VACUUM PUMP TO A VACUUM OF 2.5 MM HG ABSOLUTE.
SYSTEMS SHALL STAND UNDER VACUUM WITH VACUUM PUMP OFF FOR A
MINIMUM OF 12 HOURS. SYSTEMS MAY BE CHARGED WITH PROPER
REFRIGERANT AFTER ARCHITECT'S APPROVAL OF VACUUM TEST. A
DEHYDRATOR SHALL BE USED IN CHARGING HOSE DURING CHARGING OF
SYSTEMS WITH REFRIGERANT.

29. GENERAL
THIS SECTION APPLIES TO ALL MECHANICAL WORK.
ALL INSULATION SHALL BE IN STRICT ACCORDANCE WITH ASHRAE STANDARDS
AND ALL LOCAL AND STATE ENERGY CODES.
THE INSULATION WORK SHALL BE PERFORMED BY A FIRM REGULARLY ENGAGED
IN THIS TYPE WORK USING MECHANICS SKILLED IN THE TRADE.
INSTALL ALL MATERIALS AS RECOMMENDED BY THE MANUFACTURER FOR THE
SERVICE INTENDED. ALL INSULATION MATERIAL, INCLUDING SEALER MATERIAL,
ADHESIVES, COVERING MATERIAL, FINISH, ETC. SHALL HAVE A U.L. LISTED FLAME
SPREAD RATING NOT OVER 24 WITHOUT EVIDENCE OF CONTINUED
PROGRESSIVE COMBUSTION AND WITH A SMOKE DEVELOPED RATING NOT
HIGHER THAN 50. ALL COATINGS AND COVERINGS FOR HOT SERVICE SHALL BE
BREATHERTYPE AND VAPOR BARRIER TYPE FOR COLD SERVICE.

HVAC PIPING:
INSTALL REFRIGERANT SUCTION LINES AND ALL CONDENSATE DRAIN LINES
WITH 1" THICK CLOSE CELLED ELASTOMERIC INSULATION INSTALLED PER THE
MANUFACTURERS REQUIREMENTS. PAINT EXTERIOR INSULATION WITH TWO
COATS OF PAINT AS REQUIRED BY THE INSULATION MANUFACTURER.

EXTERNALLY INSULATED DUCTS:
EXTERNALLY INSULATE ALL ROUND SUPPLY, RETURN, OUTSIDE AIR, AND
EXHAUST DUCTWORK WITH 1 1/2" THICK (3/4 LBS/CU. FT. DENSITY) DUCT WRAP
WITH ALUMINUM ALL SERVICE JACKET, VAPOR BARRIER, EXCEPT PRE-INSULATED
FLEXIBLE DUCT.

30. EQUIPMENT:
CAPACITY, PERFORMANCE AND CHARACTERISTICS OF EQUIPMENT SHALL BE AS
INDICATED ON THE DRAWINGS AND AS SPECIFIED OR IMPLIED HEREIN.
CONTRACTOR SHALL BE RESPONSIBLE FOR ANY INCREASED COST TO HIMSELF
OR OTHERS FOR EQUIPMENT WHICH DEVIATES FROM THAT SCHEDULED OR
IMPLIED HEREIN. REGARDLESS OF COST AFFECT, THE ARCHITECT MUST
APPROVE ANY DEVIATION FROM THE DRAWINGS AND THE SPECIFICATION.

31. MOTORS AND STARTERS:
ALL ELECTRIC MOTORS SHALL BE HIGH EFFICIENCY TYPE WITH MAXIMUM OF 1750
RPM WITH OPEN DRIP PROOF OR TEFC ENCLOSURES, UNLESS OTHERWISE
NOTED. MOTORS LOCATED ON AIR HANDLING UNITS SHALL BE MOUNTED IN
RUBBER SUPPORTS OR THE FAN SHALL BE INDEPENDENTLY SUPPORTED ON
SPRING ISOLATORS. MOTORS LOCATED IN THE CONDITIONED SPACE SHALL BE
SELECTED FOR QUIET OPERATION AND SHALL NOT PRODUCE AN
OBJECTIONABLE "MOTOR NOISE" IN THE SPACE.
ELECTRICAL CHARACTERISTICS SHALL BE VERIFIED FROM THE ELECTRICAL
DRAWINGS, PRIOR TO BIDDING, AND VERIFIED ON THE JOB WITH THE
ELECTRICAL SUB-CONTRACTOR. IF A CONFLICT ARISES, THE ELECTRICAL
DRAWINGS SHALL BE THE AUTHORITY.
PROVIDE MOTOR STARTERS AND PROPER HEATER ELEMENTS SIZED IN
ACCORDANCE WITH NFPA 70. STARTERS SHALL BE SQUARE-D OR EQUIVALENT
WITH OVERLOAD TRIP ELEMENT IN EACH PHASE. LARGER MOTORS AND THEIR
STARTERS SHALL MEET THE REQUIREMENTS OF THE UTILITY COMPANY AS TO
INRUSH ALLOWABLE AND THE TYPE OF STARTING PERMITTED.
SHOULD ANY MECHANICAL EQUIPMENT REQUIRE EXTRA WORK BY OTHER
TRADES, FOR PROPER INSTALLATION, THIS CONTRACTOR SHALL BEAR ALL
COSTS, SUCH AS INCREASED ELECTRICAL, STRUCTURAL, ROOFING, ETC.

2. SYSTEMS TEST AND BALANCE:

THE REQUIRED TEST & BALANCE OF THE HVAC SYSTEM SHALL BE PERFORMED BY AN APPROVED INDEPENDENT TESTING AGENCY AS SPECIFIED BELOW.

AGENCY QUALIFICATIONS:

TEST & BALANCE AGENCY (TBA) SHALL BE PERFORMED BY AN INDEPENDENT AGENCY ENGAGED SOLELY IN TEST AND BALANCE WORK. AGENCY SHALL BE A MEMBER OF THE ASSOCIATED AIR BALANCE COUNCIL, (AABC) AND NATIONAL ENVIRONMENTAL BALANCING BUREAU, (NEBB).

SUBMIT A WRITTEN REPORT WITHIN 30 DAYS OF COMMENCING WORK, WITH ANY RECOMMENDED CHANGES TO INSURE BALANCING CAPABILITY.

SUBMIT A DETAILED TEST PLAN TO THE ARCHITECT ILLUSTRATING ALL FORMATS, DRAWINGS, AND TEST PROCEDURE TO BE USED FOR TESTING THE COMPLETED SYSTEM. THE APPROVED PLAN WILL BE USED FOR TESTING THE SYSTEMS. PROCEDURES SHALL INCLUDE REQUIREMENTS LISTED IN AABC/NEBB STANDARDS, LATEST EDITION AND ANY SPECIAL REQUIREMENTS FOR THIS PROJECT.

MAKE PROJECT VISITS AS REQUIRED DURING CONSTRUCTION PERIOD INSPECTING FOR PROPER INSTALLATION OF THE SYSTEM AND RELATED BALANCING DEVICES. PROJECT VISIT REPORTS SHALL BE MADE TO THE ARCHITECT IN WRITING.

CONTRACTORS REQUIREMENTS PRIOR TO TEST & BALANCE:

THE CONTRACTOR SHALL PERFORM ALL REQUIRED PRELIMINARY TESTS AND OTHER PREPARATORY WORK, INCLUDING BUT NOT LIMITED TO:

MAKE SURE ALL FANS ARE OPERATING, CHECK ROTATION, RPM, AND AMPS. CHECK ALL DAMPERS FOR OPERATION.

PUT ALL HVAC EQUIPMENT IN FULL OPERATION INCLUDING AIR UNITS, ACCU'S AND FANS. MAKE SURE ALL HVAC CONTROLS ARE INSTALLED AND FULLY OPERATIONAL. CLEAN/REPLACE FILTERS JUST PRIOR TO TESTING.

PROVIDE ALL BALANCING DEVICES AND DRIVE CHANGES THAT ARE DEDICATED NECESSARY BY T&B AGENCY FOR BALANCE AT NO ADDITIONAL COST TO THE OWNER.

TEST & BALANCE AGENCY SHALL BALANCE ALL AIR SYSTEMS FOR OPERATION WITHIN DESIGN CRITERIA. PRIME MOVERS SHALL BE WITHIN 5% OF DESIGN AND TERMINALS WITHIN 10% OF DESIGN. AIR SYSTEMS SHALL BE BALANCED AS DESCRIBED HEREIN.

TEST REPORT:

THE TBA SHALL PREPARE FIVE (5) COPIES OF A FINAL COMPREHENSIVE TEST REPORT IN THE FOLLOWING FORMAT.

REPORT SHALL BE BOUND 8-1/2 X 11" WITH SUBSTANTIAL COVERS USING APPROVED FORMS. TYPED OR COMPUTER GENERATED REPORTS ARE ACCEPTABLE.

REPORT SHALL BE INDEXED.

TABLE OF CONTENTS SHALL LIST ALL REPORTS.

ALL AIR OUTLETS SHALL BE LOCATED ON CODED DRAWINGS PREPARED BY THE T&B AGENCY. AIR OUTLETS FORMS SHALL BE PREPARED AND CORRELATED TO THE CODED DRAWINGS.

TEST SUMMARY SHALL DESCRIBE FINAL TEST PROCEDURES AND SPECIAL CONDITIONS DURING TESTS (SUCH AS THERMOSTAT OUTSIDE/RETURN AIR RELATIONSHIP), AND DUCT STATIC PRESSURE. DESCRIBE OTHER DATA THAT MAY ASSIST OPERATING PERSONNEL IN THE CONTINUING OPERATION OF THE SYSTEM.

T&B CONTRACTOR SHALL TAKE AND RECORD ALL NECESSARY READINGS AT THE FINAL BALANCE POINTS, SUCH AS BUT NOT LIMITED TO: AIR QUANTITIES, PRESSURES, SETPOINTS, ENTERING AND LEAVING COIL TEMPERATURES, SPACE INDOOR AND OUTSIDE WET AND DRY BULB TEMPERATURES, OUTDOOR WEATHER CONDITIONS, ELECTRICAL READINGS OF ALL NEW AND EXISTING MOTORS, COMPRESSORS, ETC.

TEST REPORT SHALL CONTAIN TBA CERTIFICATION OF TEST DATA AND SYSTEM CONDITIONS. SUBMIT THE TEST REPORTS, FOR REVIEW, BEFORE SUBSTANTIAL COMPLETION.

33. GREASE DUCTS:
ALL KITCHEN EXHAUST DUCTS CARRYING GREASE LADEN AIR (AND ALL SUPPLY DUCTS LOCATED WITHIN 18" OF A TYPE I EXHAUST HOOD) SHALL BE MANUFACTURED FABRICATED, DOUBLE WALL, INSULATED GREASE DUCT AS MANUFACTURED BY METAL-FAB, METALBESTOS, OR HART & COOLEY. DUCT SHALL BE SUITABLE FOR 0" CLEARANCE TO COMBUSTIBLES. DUCT SHALL CONSIST OF MINIMUM 0.035" THICK STAINLESS STEEL INNER WALL, MINIMUM 0.024" ALUMINIZED STEEL OUTER WALL, AND HIGH TEMPERATURE CERAMIC INSULATION. DUCT SHALL BE CLASSIFIED UNDER UL 1978 AND UL 2221 AND SHALL COMPLY WITH NFPA-96. DUCT SYSTEM SHALL BE RATED AS REQUIRED BY VUSBC. GREASE DUCT SYSTEM SHALL INCLUDE ALL SUPPORTS, FITTINGS, ROOF PENETRATIONS, EXPANSION JOINTS, ETC. AS NECESSARY FOR A FULL AND PROPER INSTALLATION. GREASE DUCT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. SHOP DRAWING SHALL INCLUDE A SKETCH SHOWING THE ASSEMBLY OF ALL SECTIONS. PROVIDE GREASE CLEANOUTS AND SLOPE DUCTS AS REQUIRED BY VUSBC.





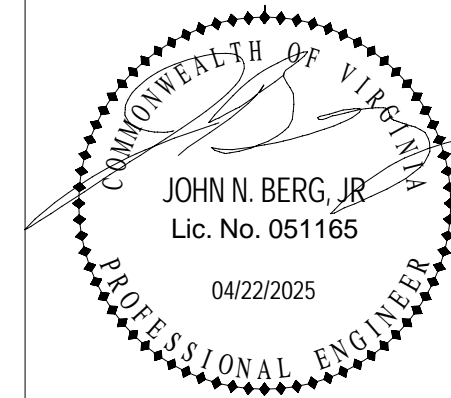
**BALZER
& ASSOCIATES**

PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

Roanoke / Richmond
New River Valley / Staunton
Harrisonburg / Lynchburg

www.balzer.cc

80 College Street, Suite H
Christiansburg, VA 24073
540.381.4290

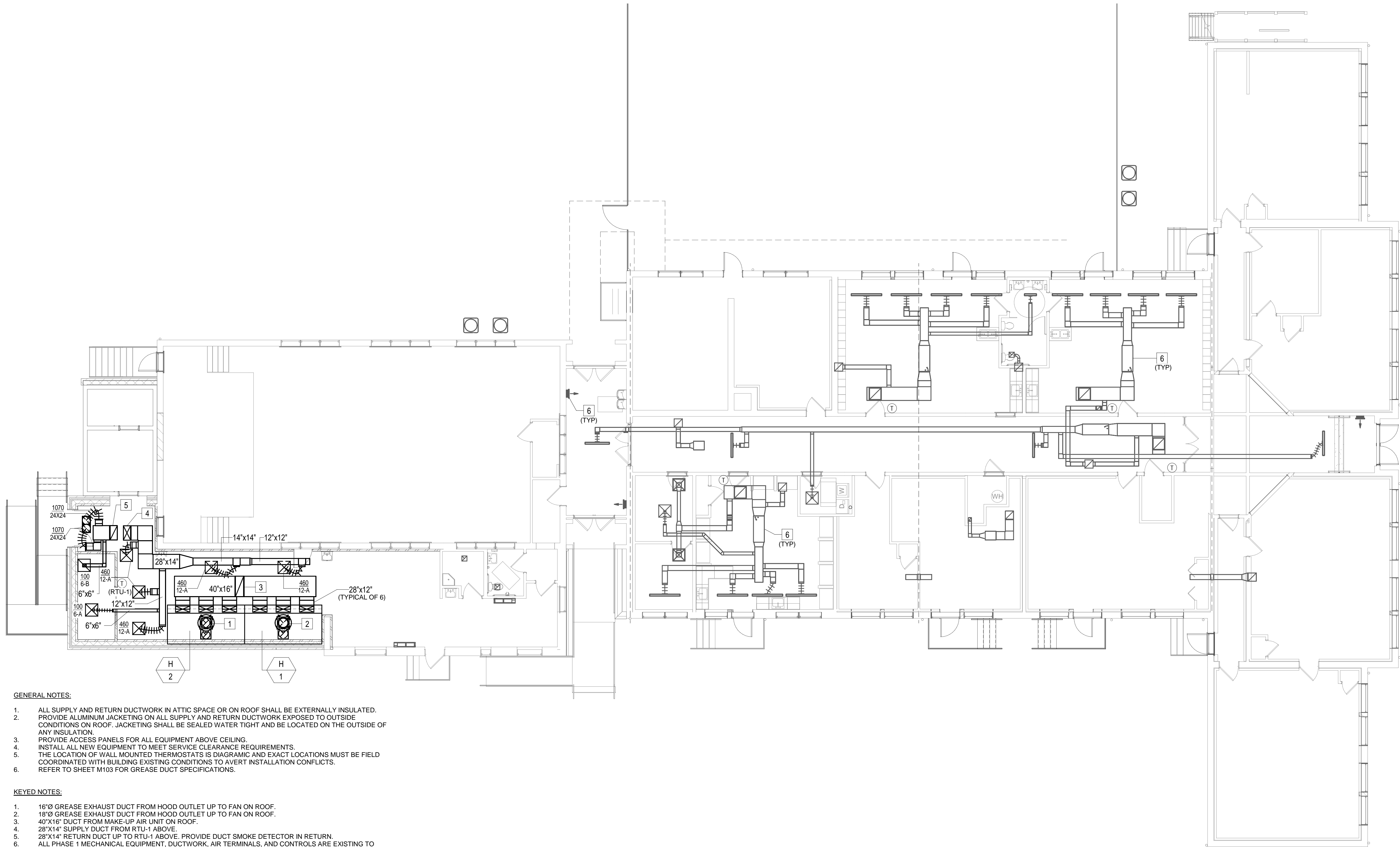


CCC PHASE 2
HISTORIC RENOVATION
MECHANICAL NEW WORK PLAN - FIRST FLOOR

1 COBBIN HARRISON DRIVE
FOLK, VIRGINIA 23001

DRAWN BY JNB
DESIGNED BY JNB
CHECKED BY JNB
DATE 04/22/2025
SCALE 1/8" = 1'-0"
REVISIONS
1 09-06-2023 3RD PARTY REVIEW COMMENTS

M200
PROJECT NO 23220008.00



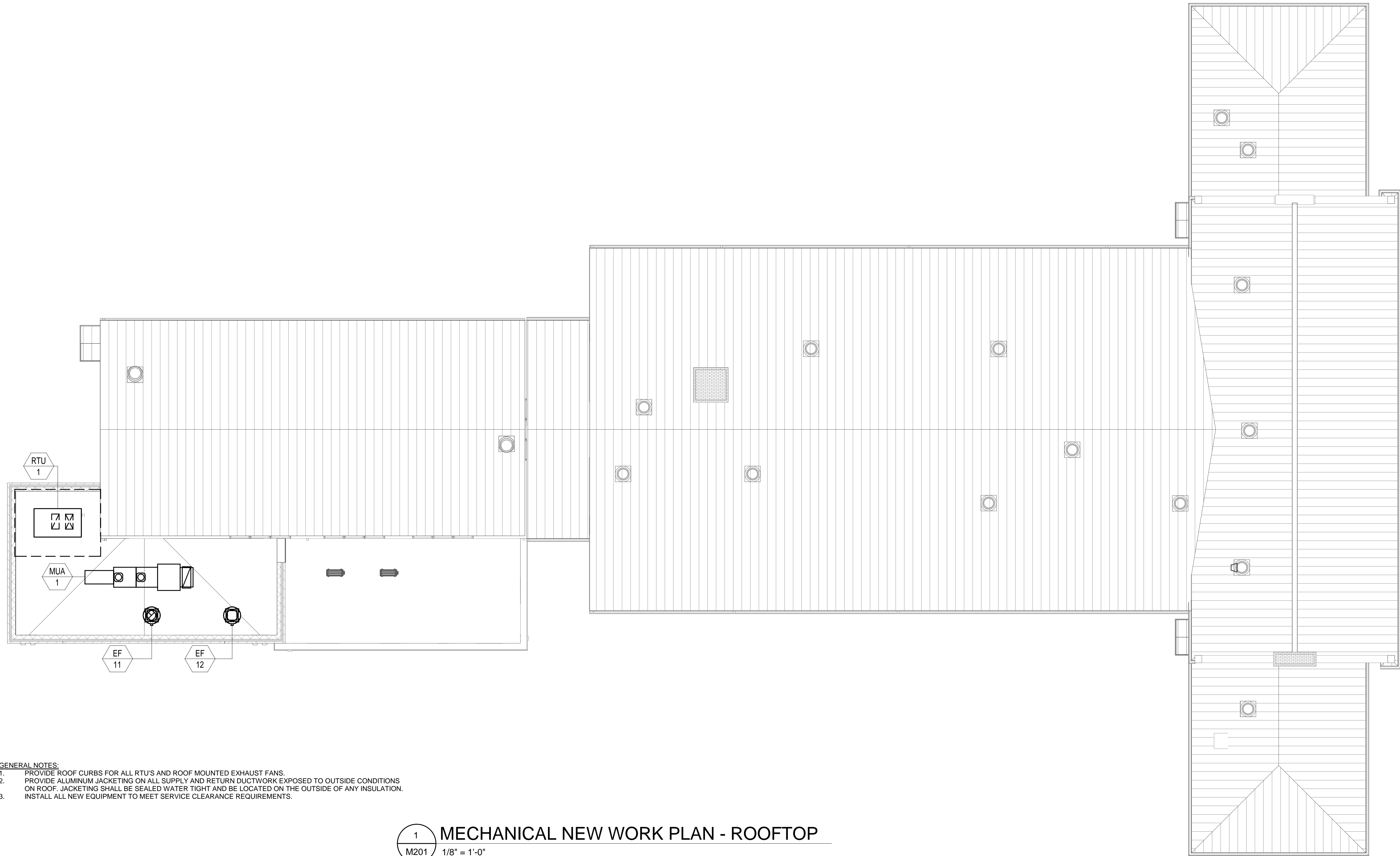
GENERAL NOTES:

1. ALL SUPPLY AND RETURN DUCTWORK IN ATTIC SPACE OR ON ROOF SHALL BE EXTERNALLY INSULATED.
2. PROVIDE ALUMINUM JACKETING ON ALL SUPPLY AND RETURN DUCTWORK EXPOSED TO OUTSIDE CONDITIONS ON ROOF. JACKETING SHALL BE SEALED WATER TIGHT AND BE LOCATED ON THE OUTSIDE OF ANY INSULATION.
3. PROVIDE ACCESS PANELS FOR ALL EQUIPMENT ABOVE CEILING.
4. INSTALL ALL NEW EQUIPMENT TO MEET SERVICE CLEARANCE REQUIREMENTS.
5. THE LOCATION OF WALL MOUNTED THERMOSTATS IS DIAGRAMIC AND EXACT LOCATIONS MUST BE FIELD COORDINATED WITH BUILDING EXISTING CONDITIONS TO AVERT INSTALLATION CONFLICTS.
6. REFER TO SHEET M103 FOR GREASE DUCT SPECIFICATIONS.

KEYED NOTES:

1. 16"Ø GREASE EXHAUST DUCT FROM HOOD OUTLET UP TO FAN ON ROOF.
2. 18"Ø GREASE EXHAUST DUCT FROM HOOD OUTLET UP TO FAN ON ROOF.
3. 40"X16" DUCT FROM MAKE-UP AIR UNIT ON ROOF.
4. 28"X14" SUPPLY DUCT FROM RTU-1 ABOVE.
5. 28"X14" RETURN DUCT UP TO RTU-1 ABOVE. PROVIDE DUCT SMOKE DETECTOR IN RETURN.
6. ALL PHASE 1 MECHANICAL EQUIPMENT, DUCTWORK, AIR TERMINALS, AND CONTROLS ARE EXISTING TO REMAIN AND SHOWN FOR REFERENCE ONLY (TYPICAL).

1
M200
MECHANICAL NEW WORK PLAN - FIRST FLOOR
1/8" = 1'-0"



- GENERAL NOTES:**
1. PROVIDE ROOF CURBS FOR ALL RTU'S AND ROOF MOUNTED EXHAUST FANS.
 2. PROVIDE ALUMINUM JACKETING ON ALL SUPPLY AND RETURN DUCTWORK EXPOSED TO OUTSIDE CONDITIONS ON ROOF. JACKETING SHALL BE SEALED WATER TIGHT AND BE LOCATED ON THE OUTSIDE OF ANY INSULATION.
 3. INSTALL ALL NEW EQUIPMENT TO MEET SERVICE CLEARANCE REQUIREMENTS.

1
M201

MECHANICAL NEW WORK PLAN - ROOFTOP

1/8" = 1'-0"



**BALZER
& ASSOCIATES**

PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS
Roanoke / Richmond
New River Valley / Staunton
Harrisonburg / Lynchburg

www.balzer.cc

80 College Street, Suite H
Christiansburg, VA 24073
540.381.4290



CCC PHASE 2
HISTORIC RENOVATION
MECHANICAL NEW WORK PLAN - ROOFTOP

1 CORBIN HARMON DRIVE
POLASKI, VIRGINIA, 24301

DRAWN BY JNB
DESIGNED BY JNB
CHECKED BY JNB
DATE 04/22/2025
SCALE 1/8" = 1'-0"
REVISIONS
1 09-06-2023 3RD PARTY REVIEW COMMENTS

M201

PROJECT NO 23220008.00

GENERAL PLUMBING NOTES:

1.

ALL WORK SHALL BE IN ACCORDANCE WITH THE 2021 VIRGINIA UNIFORM STATEWIDE BUILDING CODE, ALL FEDERAL, STATE, AND CITY CODES, ORDINANCES, AND STANDARDS.
2.

PROVIDE SHOP DRAWINGS FOR APPROVAL FOR ALL NEW EQUIPMENT.
3.

PROVIDE OPERATION AND MAINTENANCE MANUALS FOR ALL NEW EQUIPMENT TO OWNER.
4.

IT IS THE INTENT OF THESE DOCUMENTS THAT THE CONTRACTOR PROVIDE ALL LABOR, MATERIAL, EQUIPMENT AND TOOLS FOR THE COMPLETE INSTALLATION OF ALL WORK SHOWN ON THE PLANS AND/OR DESCRIBED HEREIN, INCLUDING ALL DEVICES AND CONTROLS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONING SYSTEM.
5.

ALL WORK PROVIDED UNDER THIS CONTRACT INCLUDING ALL MECHANICAL EQUIPMENT, MATERIALS, AND LABOR SHALL BE PROVIDED WITH A 1 YEAR WARRANTY.
6.

THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE. NOT ALL FITTINGS, OFFSETS, VENTS, OR DRAINS ARE SHOWN. THE CONTRACTOR SHALL INCLUDE ALL OFFSETS, VENTS, AND DRAINS AS REQUIRED FOR A FULLY FUNCTIONING SYSTEM.
7.

PROVIDE UL RATED FIRE STOPPING AROUND ALL PIPES THAT PENETRATE REATED WALL AND/OR FLOORS PROVIDE CAULKED SEAL AROUND ALL DUCT AND/OR PIPING PENETRATIONS THROUGH NON RATED FULL HEIGHT WALLS TO MINIMIZE SOUND TRANSFER.
8.

WHERE PIPE CONNECTIONS ARE SHOWN CONNECTING TO EXISTING, CONTRACTOR SHALL DETERMINE EXACT LOCATIONS AND CONNECTION SIZES BY FIELD VERIFICATION PRIOR TO INSTALLATION. SLOPES AND INVERT ELEVATIONS OF EXISTING SEWER SHALL BE ESTABLISHED AND VERIFIED BY CONTRACTOR BEFORE ANY PIPING IS INSTALLED IN ORDER THAT PROPER SLOPE WILL BE MAINTAINED AND NECESSARY INVERT ELEVATIONS OBTAINED.
9.

ALL PIPING SHALL BE LABELED FOR ITS USAGE.
10.

ALL PIPES SHALL BE COORDINATED WITH OTHER NEW AND EXISTING DUCTS, PIPES, LIGHTS, STRUCTURAL SYSTEM, CEILING SUPPORTS AND FRAMING BEFORE INSTALLATION. MINOR PIPE OFFSETS SHALL BE PROVIDED AS REQUIRED. MEASUREMENTS FOR VERTICAL CLEARANCES SHALL BE TAKEN AT THE JOB SITE BEFORE INSTALLATION OF ANY PIPING.
11.

PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL PANELS. COORDINATE INSTALLATION OF PIPES WITH ELECTRICAL PANELS WHEN SHOWN NEAR PANELS OR OVER ELECTRICAL ROOMS.
12.

PROVIDE NEW WALL CARRIERS FOR ALL NEW WALL HUNG EQUIPMENT INCLUDING LAVATORIES AND URINALS.
13.

CONTRACTOR SHALL COORDINATE WITH KITCHEN EQUIPMENT AND KITCHEN SINKS. PROVIDE ALL WATER, GAS, AND DRAINAGE SYSTEMS AS REQUIRED, COORDINATE PURCHASE AND INSTALLATION WITH OWNER AND GENERAL CONTRACTOR.
14.

REFER TO MECHANICAL CRAWL SPACE PLAN (M300) FOR SUMP PIT LOCATIONS AND PROVIDE CRAWL SPACE DRAIN AROUND BUILDING PERIMETER. FOUNDATION DRAINS SHALL BE ROUTED TO SUMP PIT/PUMP.

PLUMBING EQUIPMENT SCHEDULE:

| | |
|----|---|
| CO | JOSAM CLEANOUT |
| | WALL CHROME FLUSH WALL PLATE, RECESSED PLUG. |
| | FLOOR (UNFINISHED) - SATIN NIKALOY BRONZE TOP, RECESSED PLUG. |
| | FLOOR (FINISHED) - RECESSED SATIN BRONZE TOP TO RECEIVE FLOOR FINISH MATERIAL (CARPET/TILE), RECESSED PLUG. |
| TD | TRENCH DRAIN, ZURN MODEL ZS890, 7" WIDE REVEAL TRENCH DRAIN SYSTEM WITH "V" BOTTOM. CHANNELS ARE 80" LONG, 7" WIDE AND HAVE A 4" THROAT. MODULAR CHANNEL SECTIONS ARE MADE OF 16 GA. FABRICATED STAINLESS STEEL CONFORMING TO ASTM A-240 (TYPE 304). CHANNELS HAVE 10GA. BOLTED, FLANGED CONNECTION BETWEEN CHANNEL SECTIONS THAT WILL NOT SEPARATE DURING THE INSTALLATION. GASKETS AVAILABLE. CHANNELS WEIGH LESS THAN 2.31 LBS. PER LINEAR FOOT, HAVE A SMOOTH, 1-1/2" RADIUS SELF CLEANING BOTTOM. CHANNELS HAVE FEET FOR PATTY POUR OR LEVELING STUDS STANDARD TO SECURE TRENCH IN ITS FINAL LOCATION. CHANNELS ARE PROVIDED WITH STANDARD FS GRATES THAT LOCK DOWN TO FRAME. ZURN 6" WIDE REVEAL FABRICATED STAINLESS STEEL GRATE CONFORMING TO ASTM SPECIFICATION A-240, (TYPE 304), IS RATED CLASS A PER THE DIN EN1433 TOP LOAD CLASSIFICATION. SUPPLIED IN 40" [1016MM] NOMINAL LENGTHS WITH 5/16" WIDE SLOTS, AND 3/4" BEARING DEPTH. GRATE HAS AN OPEN AREA OF 12.00 SQ. IN PER FT. |

PLUMBING FIXTURE SCHEDULE:

| | |
|------|---|
| PF-1 | 8" POT FILLER MIXING FAUCET, QUARTER-TURN ETERNA CARTRIDGES W/ SPRING CHECKS, LEVER HANDLES, 18" DOUBLE JOINT SWING NOZZLE, HEAT RESISTANT HANDLE & 1/2" NPT MALE INLETS |
| HR-1 | HOSE REEL: REGENCY MODEL# 600HRSS50NS, DURABLE STAINLESS STEEL REEL HOUSES 50' HOSE, ADJUSTABLE GUIDE ARM FOR PRECISE CONTROL, LOCKING MECHANISM FOR LOCKING AT PREFERRED LENGTH, 6 3/4" WIDE L-SHAPED BASE WITH GROOVE REINFORCEMENT TO ENSURE STABILITY, SPRING REDUCER |
| WH-1 | WALL HYDRANT: ANTI-SIPHON, FREEZELESS TYPE, WOODFORD MODEL B65, CONCEALED BOX TYPE WITH ANTI-SIPHON VACCUM BREAKER, 3/4" INLET AND OUTLET. EXTERIOR SHALL BE ROUGH BRASS WITH KEY. COORDINATE LOCATIONS WITH WALL THICKNESS. |
| S-1 | KITCHEN HAND SINK: ADVANCE TABCO 7-PS-49 HAND SINK WITH SPLASH MOUNT FAUCET - 19" X 19 3/4", 4" O.C. SPLASH MOUNTED FAUCET AND 2 STAINLESS STEEL SUPPORT BRACKETS. (HARDWARE INCLUDED). |

PLUMBING LEGEND

| | |
|--|--|
| | GAS LINE |
| | SANITARY SEWER (W) |
| | VENT (V) |
| | COLD WATER (CW) |
| | HOT WATER (HW) |
| | HOT WATER RECIRCULATION |
| | STORM DRAIN (SD) |
| | DRAIN LINE |
| | ACID RESISTANT PIPE |
| | COMPRESSED AIR |
| | DIRECTION OF FLOW |
| | AIR CUSHION-PDI UNIT RATING |
| | PIPE ANCHOR |
| | GATE VALVE |
| | GLOBE VALVE |
| | CHECK VALVE |
| | BALANCING COCK |
| | HOSE BIB |
| | WALL HYDRANT |
| | CIRCUIT SETTER BALANCING VALVE |
| | UNION |
| | STRAINER |
| | BACKFLOW PREVENTER |
| | PRESSURE REDUCING VALVE |
| | AIR PRESSURE REGULATING VALVE |
| | PRESSURE RELIEF VALVE |
| | CAP |
| | FLEXIBLE CONNECTION |
| | ELBOW, 90 DEGREES |
| | ELBOW, 90 DEGREES -TURNED UP |
| | ELBOW, 90 DEGREES -TURNED DOWN |
| | ELBOW, 45 DEGREES |
| | TOP OF MAIN BRANCH CONNECTION |
| | BOTTOM OF MAIN BRANCH CONNECTION |
| | SIDE OF BRANCH CONNECTION |
| | FLOOR DRAIN |
| | CLEAN OUT IN FLOOR |
| | CLEAN OUT PLUG |
| | PRESSURE GAGE |
| | POINT OF CONNECTION BETWEEN NEW AND EXISTING WORK (EXISTING PIPING, OR EQUIPMENT) |
| | (NEW PIPING, OR EQUIPMENT) |
| | POINT OF DISCONNECTION OF EXISTING PIPING, OR EQUIPMENT (PIPING, OR EQUIPMENT TO REMAIN) |
| | (PIPING, OR EQUIPMENT TO BE REMOVED) |



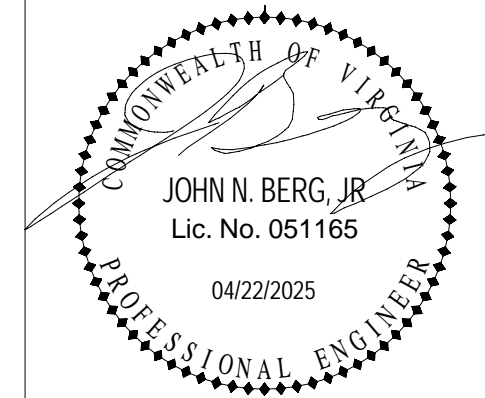
BALZER & ASSOCIATES

PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

Roanoke / Richmond
New River Valley / Staunton
Harrisonburg / Lynchburg

www.balzer.cc

80 College Street, Suite H
Christiansburg, VA 24073
540.381.4290



CCC PHASE 2

HISTORIC RENOVATION

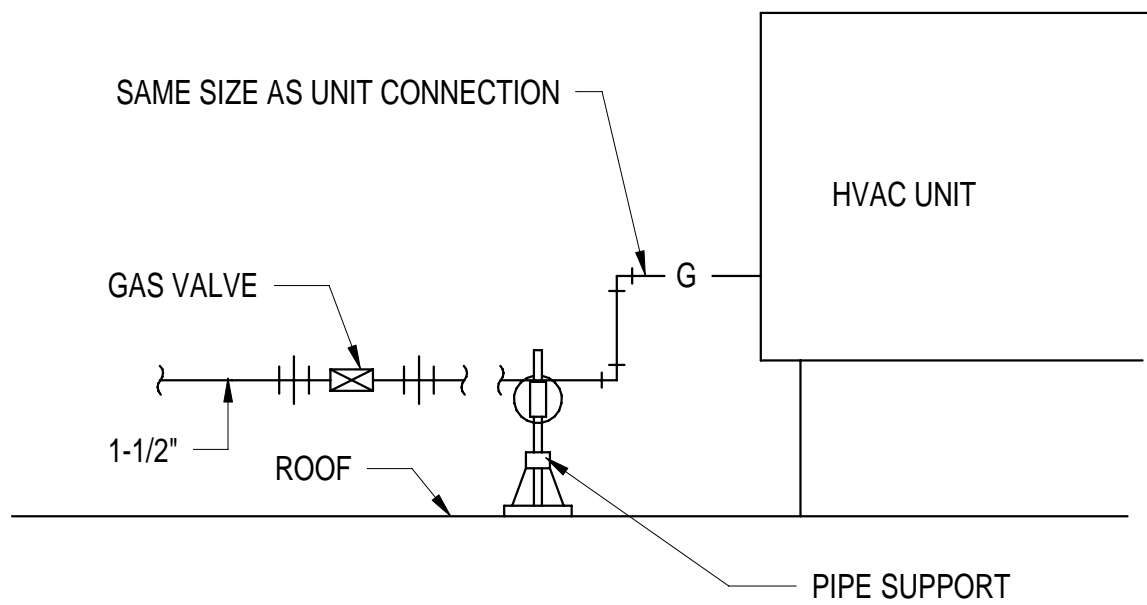
GENERAL NOTES & LEGEND

1 CORBIN HARMON DRIVE
POLASKI, VIRGINIA, 24091

| | |
|-------------|-------------|
| DRAWN BY | JNB |
| DESIGNED BY | JNB |
| CHECKED BY | JNB |
| DATE | 04/22/2025 |
| SCALE | 12" = 1'-0" |
| REVISIONS | |

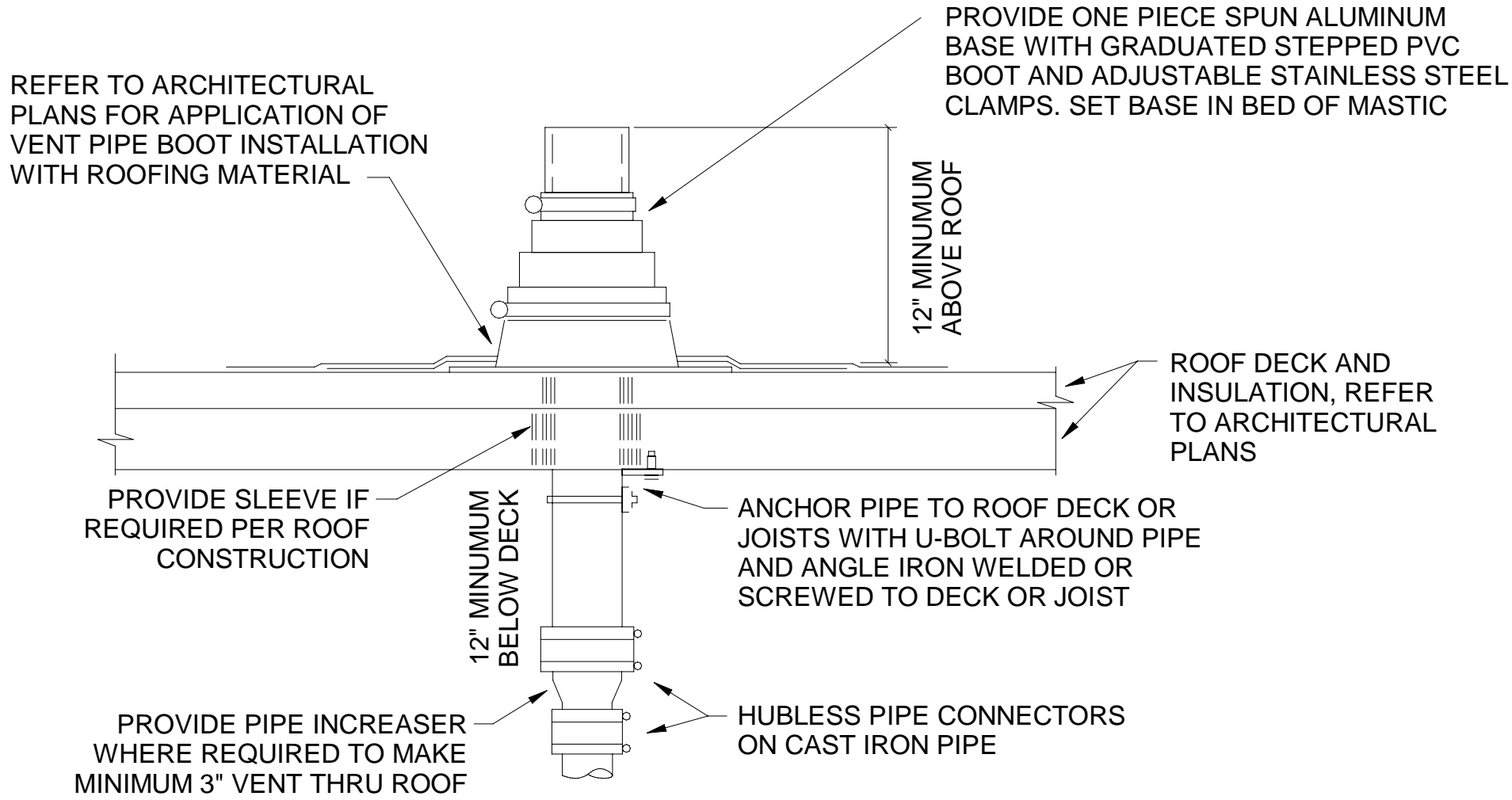
P101

PROJECT NO 23220008.00



DETAIL - ROOFTOP GAS PIPING CONNECTION

NOT TO SCALE

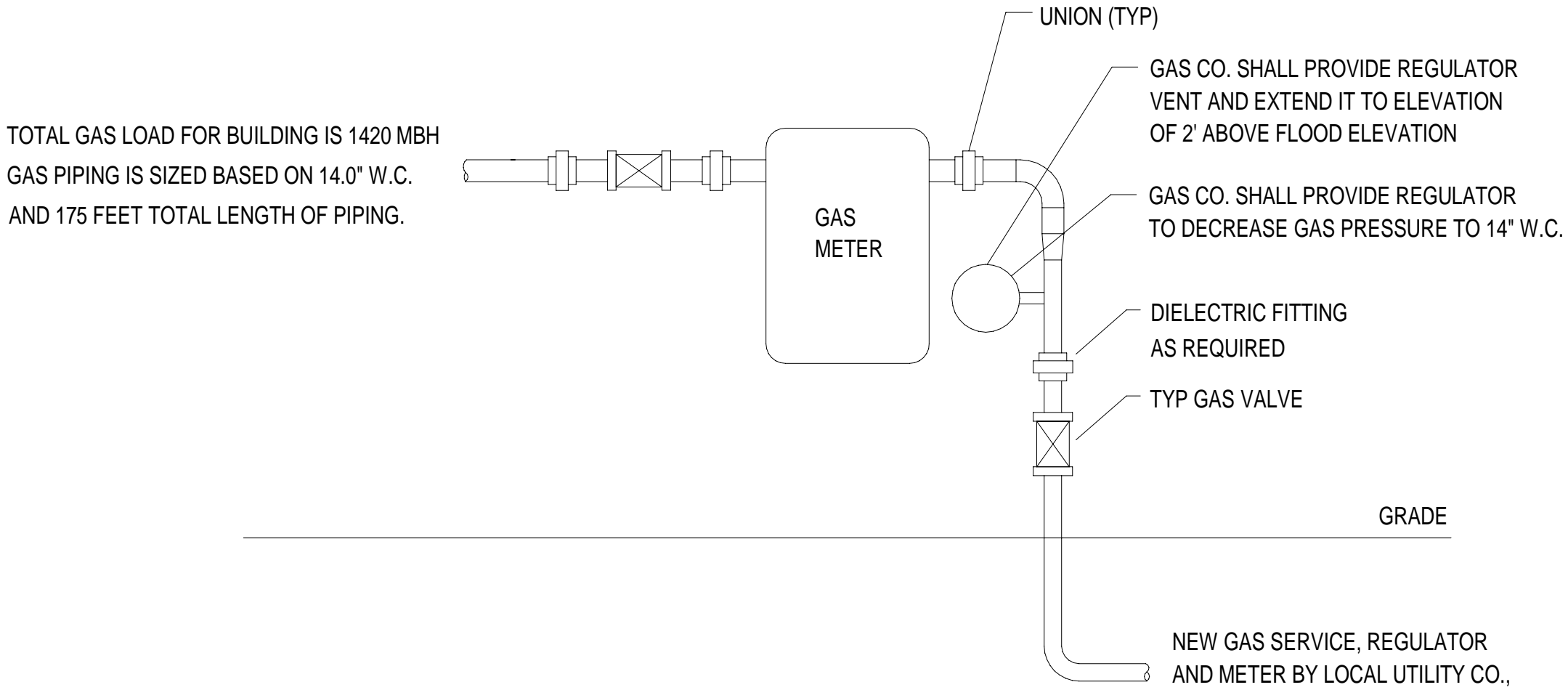


REFER TO PLANS FOR VTR PIPE SIZES AND LOCATIONS. LOCATE VTR A MINIMUM OF 20 FEET HORIZONTAL (UNLESS APPROVED BY ENGINEER PRIOR TO INSTALLATION) OR THREE FEET VERTICAL ABOVE ANY BUILDING OPENING OR FRESH AIR INTAKE, AND ONE FOOT FROM ANY VERTICAL SURFACE. PROVIDE 1" FIBERGLASS INSULATION WITH ALL-SERVICE JACKET ON VENT PIPE INSIDE BUILDING WITHIN SIX FEET OF VENT THRU ROOF LOCATION. VERIFY FLASHING AND COUNTERFLASHING WITH ROOFING CONTRACTOR.

DETAIL - VENT THRU ROOF (VTR)

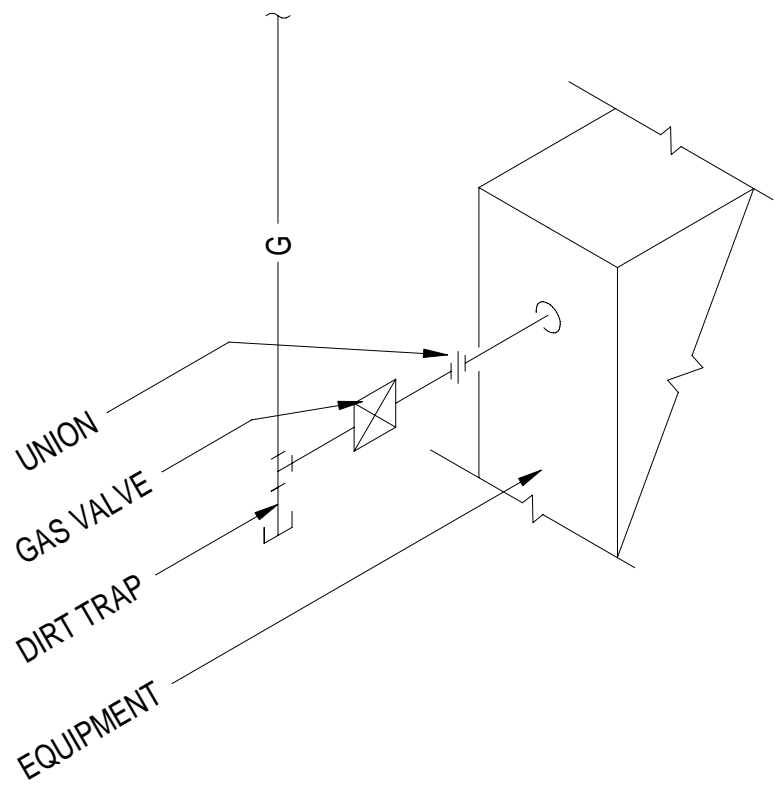
NOT TO SCALE

| GAS LOAD SUMMARY | |
|------------------|----------|
| CURRENT LOAD: | |
| RTU-1: | 120 MBH |
| MUA-1: | 287 MBH |
| STEAM KETTLE | 135 MBH |
| 48" CHARBROLIER | 40 MBH |
| FRYER | 120 MBH |
| 60" RANGE | 307 MBH |
| CONV. OVEN | 90 MBH |
| FUTURE LOAD: | |
| RTU-2: | 320 MBH |
| TOTAL LOAD: | 1419 MBH |



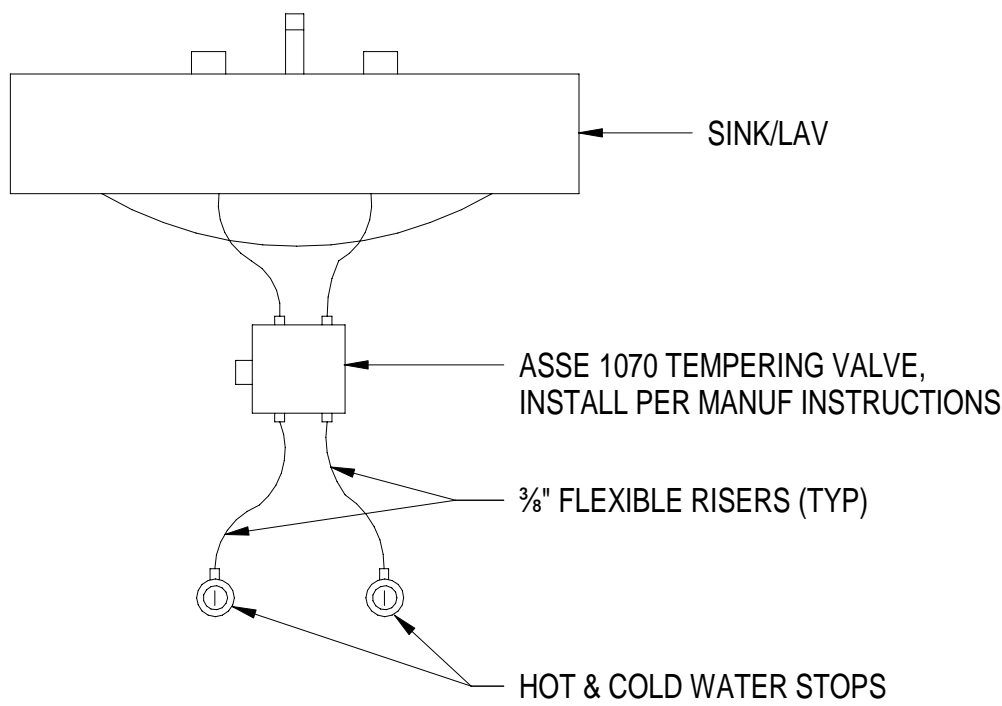
DETAIL - GAS METER CONNECTION

NOT TO SCALE



DETAIL - EQUIPMENT GAS CONNECTION

NOT TO SCALE



DETAIL - TEMPERING VALVE FOR SINKS AND LAVS

NOT TO SCALE



BALZER
& ASSOCIATES

PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS
Roanoke / Richmond
New River Valley / Staunton
Harrisonburg / Lynchburg

www.balzer.cc
80 College Street, Suite H
Christiansburg, VA 24073
540.381.4290



CCC PHASE 2
HISTORIC RENOVATION
PLUMBING DETAILS
1 CORBIN-HARMON DRIVE
POLASKI, VIRGINIA, 24071

DRAWN BY JNB
DESIGNED BY JNB
CHECKED BY JNB
DATE 04/22/2025
SCALE As indicated
REVISIONS

PLUMBING SPECIFICATIONS

1. GENERAL PROVISIONS:

1.A. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2021 VIRGINIA UNIFORM STATEWIDE BUILDING CODE, ALL FEDERAL, STATE, AND CITY CODES, ORDINANCES, AND STANDARDS.

1.B. THE PLANS ARE DIAGRAMMATIC IN NATURE AND BASED ON ONE MANUFACTURER'S EQUIPMENT. THEY ARE NOT INTENDED TO SHOW EVERY ITEM IN ITS EXACT LOCATION, THE EXACT DIMENSIONS, OR ALL THE DETAILS OF THE EQUIPMENT. VERIFY THE ACTUAL DIMENSIONS OF THE EQUIPMENT PROPOSED TO BE USED. INSTALLATION SHALL BE WITHIN THE LIMITATIONS IMPOSED BY THE ARCHITECTURAL, STRUCTURAL, HVAC, ELECTRICAL, AND PLUMBING REQUIREMENTS WITH ADEQUATE SPACE FOR MAINTENANCE.

1.C. GUARANTEE: ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED TO BE FREE FROM DEFECTS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE AND CONTRACTOR SHALL MAKE GOOD, WITHOUT ADDITIONAL COST TO THE OWNER, ANY DEFECTS WHICH MAY APPEAR WITHIN THAT PERIOD. MANUFACTURER'S WARRANTIES EXTENDING BEYOND ONE YEAR SHALL BE PROCESSED AND TURNED OVER TO THE OWNER.

1.D. MAJOR ITEMS ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INCIDENTAL ITEMS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM.

1.E. A TRADE NAMES AND CATALOG NUMBERS SHALL BE INTERPRETED AS ESTABLISHING A GENERAL DESIGN AND STANDARD OF QUALITY AND SHALL NOT BE CONSTRUED AS LIMITING COMPETITION. UNLESS STATED OTHERWISE, THE CONTRACTOR MAY USE ANY ARTICLE WHICH, IN HIS JUDGEMENT, AND WITH WRITTEN COMMENT FROM THE ARCHITECT/ENGINEER INDICATING NO OBJECTION, IS EQUAL OR SUPERIOR TO THAT SPECIFIED. DRAWINGS SHOWING CHANGES OR REVISIONS REQUIRED BY THE SUBSTITUTION FOR SPECIFIED ITEMS SHALL BE SUBMITTED WITH THE SHOP DRAWING DATA, AND THE COSTS OF ALL SUCH CHANGES SHALL BE BORNE BY THE CONTRACTOR.

1.F. SIMILAR ITEMS SHALL BE PROVIDED BY A SINGLE MANUFACTURER.

1.G. ALL REQUIRED WALL OR FLOOR OPENINGS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND/OR OTHER RELEVANT TRADES.

1.H. ALL PIPING SHALL BE INSTALLED ABOVE THE CEILING UNLESS INDICATED OTHERWISE. ALL WATER PIPING AND P-TRAPS SHALL BE INSTALLED WITHIN THE BUILDINGS INSULATION ENVELOPE OR BE PROVIDED WITH A FREEZE PROTECTION SYSTEM.

1.I. PROVIDE SUPPORTS TO RIGIDLY ATTACH ALL EQUIPMENT, APPURTENANCES AND PIPE AS REQUIRED FOR SUPPORT. PRIOR TO INSTALLATION OF HANGERS AND INSERTS, THE CONTRACTOR SHALL COORDINATE LOCATIONS AND REQUIREMENTS TO MINIMIZE CONFLICTS WITH OTHER BUILDING SYSTEMS. INSTALLATION OF PIPE HANGERS AND SUPPORTS SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURERS STANDARDIZATION SOCIETY (MSS) STANDARDS SP-58, 69 AND 89.

1.J. THE CONTRACTOR SHALL MAKE FINAL CONNECTIONS TO ALL EQUIPMENT INDICATED TO BE FURNISHED BY OTHERS.
2. SUBMITTAL AND SHOP DRAWINGS:

2.A. SUBMIT MANUFACTURER'S CERTIFIED DATA RELATIVE TO ALL EQUIPMENT, PIPING, CONTROLS, ETC. REQUIRED FOR THE INSTALLATION OF THE PLUMBING AND FIRE PROTECTION SYSTEMS. SUBMIT FOR REVIEW ALL NECESSARY ENGINEERING, PRODUCT AND INSTALLATION DATA, SHOP DRAWINGS, SAMPLES ETC. FOR ALL EQUIPMENT, MATERIAL, AND SYSTEMS TO ASCERTAIN COMPLIANCE WITH THE TECHNICAL REQUIREMENTS OF THE CONTRACT DOCUMENTS.

2.B. SUBMIT A DIGITAL PDF OF ALL NECESSARY DATA, CUTS, MANUFACTURER'S SELECTIONS, CATALOGS, BULLETINS, INSTALLATION INSTRUCTIONS, DRAWINGS, DIAGRAMS, CURVES, ETC. CLEARLY INDICATE ON THE SUBMITTED DATA, THE MANUFACTURER'S NAME, PRODUCT NUMBER(S), OPTIONS, EQUIPMENT CAPACITY, DIMENSIONAL DATA, WEIGHTS, AND OTHER APPLICABLE TECHNICAL DATA FOR THE PROJECT.

2.C. TRADE NAMES, MANUFACTURERS, AND CATALOGUE NUMBERS ARE MENTIONED HEREIN AND ON THE DRAWINGS SOLELY IN ORDER TO ESTABLISH A STANDARD FOR THE TYPE, GENERAL DESIGN, AND QUALITY OF PRODUCT REQUIRED. OTHER PRODUCTS SIMILAR IN DESIGN OF EQUIVALENT QUALITY CAPABLE OF FITTING WITHIN THE SPACES ALLOCATED AND COMPLYING WITH THE DRAWINGS AND SPECIFICATIONS WILL BE CONSIDERED AFTER THE CONTRACT IS LET UNLESS "PRIOR APPROVAL" REQUIREMENTS ARE SET FORTH IN THESE DOCUMENTS.
- 2.D. REVIEW OF SUBMITTALS AND SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR FITTING THE EQUIPMENT IN THE SPACE ALLOTTED WITH SPACE FOR ALL CONNECTIONS AND SERVICING AND FOR THE COORDINATION OF THE WORK WITH WORK OF OTHER TRADES.

2.E. THE CONTRACTOR SHALL REVIEW ALL SUBMITTALS AND SHOP DRAWINGS AND INDICATE BY STAMP OR LETTER THAT HE HAS REVIEWED THEM, BEFORE FORWARDING THEM TO THE ARCHITECT AND/OR ENGINEER. SUBMITTALS AND DRAWINGS WILL BE RETURNED AFTER REVIEW INDICATING WHETHER EXCEPTIONS ARE TAKEN, THE SUBMITTAL RETURNED WITH CORRECTIONS, OR IS COMPLETELY REJECTED. RESUBMISSION OF REVISED SUBMITTALS AND SHOP DRAWINGS, IF REQUIRED, SHALL BE DONE BEFORE INSTALLATION AND CONSTRUCTION IS BEGUN.

2.F. CORRECTIONS OR COMMENTS MADE ON THE SUBMITTALS AND DRAWINGS DURING THIS REVIEW DOES NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THIS REVIEW IS FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, FABRICATION PROCESSES, TECHNIQUES OF CONSTRUCTION, COORDINATING THE WORK WITH THAT OF ALL OTHER TRADES, AND PERFORMING WORK IN A SAFE AND SATISFACTORY MANNER. REVIEW OF THE SUBMITTALS SHALL NOT PERMIT ANY DEVIATION FROM PLANS AND SPECIFICATIONS.
3. AS-BUILT DRAWINGS:

3.A. MAINTAIN DAILY UPDATED DRAWINGS SHOWING DEVIATIONS FROM CONSTRUCTION DOCUMENTS. AT THE END OF THE PROJECT, PROFESSIONALLY PREPARE AS-BUILT DRAWINGS AND SUBMIT DRAWINGS TO THE ARCHITECT/ENGINEER.
4. OPERATION AND MAINTENANCE MANUALS:

4.A. UPON COMPLETION OF THE PROJECT, SUBMIT ALL OPERATION AND MAINTENANCE MANUALS, WARRANTIES, SPARE PARTS LIST, AS-BUILT DRAWINGS, TEST AND BALANCE REPORTS, AND LETTER OF GUARANTEE ALL BOUND IN THREE RING BINDERS, CLEARLY SHOWING WHICH EQUIPMENT WAS SUPPLIED TO THE JOB.
5. PIPING SPECIALTIES:

5.A. ACCESS DOORS: ACCESS DOORS SHALL BE PROVIDED FOR ALL CONCEALED VALVES, CONTROLS, AND ANY OTHER EQUIPMENT OR MATERIALS REQUIRING INSPECTION OR MAINTENANCE. ACCESS DOORS SHALL BE FURNISHED FOR FLOORS, WALLS AND CEILINGS, OF ADEQUATE SIZE SO THAT CONCEALED ITEMS WILL BE READILY ACCESSIBLE FOR SERVICING OR FOR REMOVAL AND REPLACEMENT IF NECESSARY.

5.B. PIPE ESCUTCHEONS: INSTALL PIPE ESCUTCHEONS ON EACH PIPE PENETRATION THRU FLOORS, WALLS PARTITIONS, AND CEILINGS WHERE PENETRATION IS EXPOSED TO VIEW AND ON EXTERIOR OF BUILDING. SECURE ESCUTCHEON TO PIPE OR INSULATION SO ESCUTCHEON COVERS PENETRATION HOLE, AND IS FLUSH WITH ADJOINING SURFACE. PROVIDE SHEET STEEL ESCUTCHEONS, SOLID OR SPLIT HINGED. FOR AREAS WHERE WATER AND CONDENSATION CAN BE EXPECTED TO ACCUMULATE, PROVIDE CAST BRASS OR SHEET BRASS ESCUTCHEONS, SOLID OR SPLIT HINGED.

5.C. PIPE SLEEVES: INSTALL PIPE SLEEVES WHERE PIPING PASSES THROUGH WALLS, FLOORS, CEILINGS, AND ROOFS. DO NOT INSTALL SLEEVES THROUGH STRUCTURAL MEMBERS OF WORK, EXCEPT AS DETAILED ON DRAWINGS, OR AS REVIEWED BY ARCHITECT/ENGINEER. SIZE SLEEVES SO THAT PIPING AND INSULATION (IF ANY) WILL HAVE FREE MOVEMENT IN SLEEVE, INCLUDING ALLOWANCE FOR THERMAL EXPANSION; BUT NOT LESS THAN 2 PIPE SIZES LARGER THAN PIPING RUN. INSTALL LENGTH OF SLEEVE EQUAL TO THICKNESS OF CONSTRUCTION PENETRATED, AND FINISH FLUSH TO SURFACE; EXCEPT FLOOR SLEEVES. EXTEND FLOOR SLEEVES 1/4 INCH ABOVE LEVEL FLOOR FINISH, AND 3/4 INCH ABOVE FLOOR FINISH SLOPED TO DRAIN. PROVIDE TEMPORARY SUPPORT OF SLEEVES DURING PLACEMENT OF CONCRETE AND OTHER WORK AROUND SLEEVES, AND PROVIDE TEMPORARY CLOSURE TO PREVENT CONCRETE AND OTHER MATERIALS FROM ENTERING SLEEVES.

5.D. WATER HAMMER ARRESTORS (WHA): PROVIDE AT ALL FAST OPENING WATER VALVES INCLUDING WATER CLOSETS, URINALS, AND CLOTHES WASHERS. SHALL BE ZURN MODEL 1260XL OR EQUIVALENT AND SHALL BE SIZED AND PLACED WITHIN THE SYSTEM AS RECOMMENDED BY THE MANUFACTURER.
6. INSULATION:

6.A. FLAME/SMOKE RATINGS: PROVIDE COMPOSITE PLUMBING INSULATION (INSULATION, JACKETS, COVERINGS, SEALERS, MASTICS AND ADHESIVES) WITH FLAME-SPREAD RATING OF 25 OR LESS, AND SMOKE-DEVELOPED RATING OF 50 OR LESS, AS TESTED BY ASTM E84 METHOD. INSULATION SHALL BE LABELED BY THE MANUFACTURER. THE LABEL SHALL INDICATE THE INSULATING VALUE, FLAME SPREAD AND SMOKE-DEVELOPED RATING.

6.B. INSTALLATION: INSULATION SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS USING ONLY ADHESIVES, MASTICS AND PLUMBING FASTENERS APPROVED BY THE INSULATION MANUFACTURER. INSULATION SHALL NOT BE APPLIED UNTIL AFTER THE EQUIPMENT HAS BEEN TESTED WITH RESULTS ACCEPTABLE TO THE ARCHITECT/ENGINEER. INSULATION WITH A VAPOR BARRIER JACKET SHALL BE APPLIED WITH A CONTINUOUS, UNBROKEN VAPOR SEAL AND ALL JOINTS SHALL BE SEALED WITH A VAPOR BARRIER ADHESIVE UNLESS OTHERWISE INDICATED. STAPLES, STICK CLIPS AND HANGERS SHALL BE VAPOR SEALED WHERE THEY PUNCTURE VAPOR BARRIER JACKETS.

6.C. MATERIALS:

6.C.A GLASS FIBER PIPE INSULATION: HEAVY DENSITY PREFORMED PIPE INSULATION WITH OPERATING TEMPERATURE RANGE OF -60 DEGREES F TO 350 DEGREES F, THERMAL CONDUCTIVITY "K"=0.24 BTU-IN/HOUR-SF-DEG F AT 100 DEGREES F, FACTORY APPLIED JACKET (ASJ) SHALL CONSIST OF WHITE KRAFT PAPER BONDED TO ALUMINUM FOIL AND REINFORCED WITH GLASS FIBER YARN. EQUAL TO OWENS-CORNING ASJ.

6.C.B.CELLULAR FOAM PIPE INSULATION: TUBULAR, FLEXIBLE, FIRE RESISTANT INSULATION WITH OPERATING TEMPERATURE RANGE OF -40 DEGREES F TO 220 DEGREES F, THERMAL CONDUCTIVITY "K"=0.27 BTU-IN/HOUR-SF-DEG F AT 75 DEGREES F. NO JACKET REQUIRED. EQUAL TO ARMSTRONG ARMAFLEX AP.

6.C.C.A POLYETHYLENE PIPE INSULATION: INSULATION MATERIALS CORPORATION OF AMERICA (IMCOA), FLEXIBLE CLOSED CELL POLYETHYLENE TUBING, ASTM C534, "K"=0.24 AT 75 DEGREES F, SERVICE TEMPERATURE -110F TO 210F. NO JACKET REQUIRED.

6.D. OMIT INSULATION ON EXPOSED PLUMBING FIXTURE RUNOUTS FROM FACES OF WALL OR FLOOR TO FIXTURE; ON UNIONS, FLANGES, STRAINERS, FLEXIBLE CONNECTIONS, AND EXPANSION JOINTS.

6.E. COVER VALVES, FITTINGS AND SIMILAR ITEMS IN EACH PIPING SYSTEM WITH EQUIVALENT THICKNESS AND COMPOSITION OF INSULATION AS APPLIED TO ADJOINING PIPE RUN.

6.F. ALL DOMESTIC WATER PIPING ABOVE GROUND INCLUDING COLD, HOT, AND HOT WATER RE-CIRCULATING PIPING SHALL BE INSULATED WITH A MINIMUM 1/2" THICK INSULATION.
7. PLUMBING PIPING:

7.A. DOMESTIC WATER PIPING SHALL BE COPPER TUBE AND FITTINGS IN ACCORDANCE WITH ASTM B88, TYPE L HARD DRAWN COPPER. JOINTS SHALL BE MADE WITH LEAD FREE SOLDER.

7.B. STORM, SOIL, WASTE, AND VENT PIPING BELOW GRADE SHALL BE SCHEDULE 40 PVC PIPE AND FITTINGS. PVC SCHEDULE 40 PIPE SHALL BE IRON PIPE SIZE (IPS) CONFORMING TO ASTM D 1785. INJECTION MOLDED PVC SCHEDULE 40 FITTINGS SHALL CONFORM TO ASTM D 2466. PIPE AND FITTINGS SHALL BE MANUFACTURED AS A SYSTEM AND BE THE PRODUCT OF ONE MANUFACTURER. PIPE AND FITTINGS SHALL CONFORM TO NSF INTERNATIONAL STANDARD 61 AND THE HEALTH-EFFECTS PORTION OF NSF STANDARD 14.

7.C. STORM, SOIL, WASTE, AND VENT PIPING ABOVE GRADE SHALL BE HUBLESS CAST IRON TYPE DESIGNED FOR SAID APPLICATION. HUBLESS CAST IRON PIPE AND FITTINGS SHALL BE MANUFACTURED FROM GRAY CAST IRON AND SHALL CONFORM TO ASTM A 888 AND CISPI STANDARD 301. ALL PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE® AND LISTED BY NSF® INTERNATIONAL. HUBLESS COUPLINGS SHALL CONFORM TO CISPI STANDARD 310, SHALL BE MANUFACTURED IN THE UNITED STATES, AND BE CERTIFIED BY NSF® INTERNATIONAL.

7.D. CONDENSATE DRAINS SHALL BE TYPE L HARD DRAWN COPPER. JOINTS SHALL BE MADE WITH LEAD FREE SOLDER.
- 7.E. SLOPE ALL DRAIN LINES AT 1/4 INCH PER FOOT FOR SIZES LESS THAN 4 INCHES. SLOPE AT 1/8 INCH PER FOOT FOR SIZES 4 INCH AND LARGER.

7.F. SOIL, WASTE, AND VENT PIPING BELOW GRADE SHALL BE A MINIMUM OF 2 INCH AND SHALL BE PROVIDED WITH METALLIC TRACING/DETECTION WIRE.

7.G. VENTS SHALL EXTEND A MINIMUM OF 12 INCHES ABOVE THE ROOF. ROOF FLASHING SHALL BE PROVIDED AND COORDINATED WITH THE GENERAL AND ROOFING CONTRACTORS.

7.H. TRENCHING AS REQUIRED FOR UNDERGROUND PIPING SHALL BE GRADED TO UNIFORM PITCH AND SHALL BE NO WIDER THAN NECESSARY FOR PIPING INSTALLATION. CLEAN BACKFILL SHALL BE USED AND THOROUGHLY TAMPED IN LAYERS NOT EXCEEDING 6 INCHES TO A MINIMUM DEPTH OF 1 FOOT ABOVE PIPE. COMPACTED BACKFILL SHALL BE USED FOR THE ENTIRE DEPTH OF EXCAVATION UNDER SLAB ON GRADE CONSTRUCTION.

7.I. NATURAL GAS SYSTEMS: PIPING SHALL BE SCHEDULE 40 BLACK STEEL PIPE, ASTM A120/A53-CW OR ASTM/A53 GRADE B (WELDED OR SEAMLESS); WROUGHT STEEL BUTTWELDING FITTINGS. GAS COCKS 2 INCHES AND SMALLER SHALL BE RATED FOR 150 PSI, NON SHOCK WOG, BRONZE STRAIGHTWAY COCK, FLAT OR SQUARE HEAD, WITH THREADED ENDS. ALL GAS PIPING CONNECTIONS SHALL BE PROVIDED WITH A 6 INCH DIRT TRAP, UNION, AND GAS COCK SHUT OFF VALVE. ALL JOINTS SHALL BE SEALED WITH CHEMICALLY RESISTANT SEALER APPLIED TO MALE THREADS OF PIPE CONNECTION. GAS PIPING SHALL BE INSTALLED WITH A 1/64 INCH PER FOOT DOWNWARD SLOPE IN THE DIRECTION OF FLOW. A ROLLER BEARING TYPE PIPE SUPPORT SHALL BE USED TO SUPPORT ALL GAS PIPING LOCATED ON THE ROOF. SUPPORTS SHALL HAVE A POLYCARBONATE BASE, WITH PIPE RESTING ON A SELF LUBRICATING POLYCARBONATE RESIN AXLE AND ROLLER AND BE SIZED FOR THE PIPE BEING SUPPORTED. MAXIMUM SPACING SHALL NOT EXCEED 10FT.
8. PLUMBING FIXTURES, PUMPS, AND WATER HEATERS SHALL BE PROVIDED AND INSTALLED AS PER THE PLUMBING FIXTURE SCHEDULE. ALL EXPOSED FIXTURE SUPPLIES AND WASTE LINES SHALL BE CHROME PLATED. NO EXPOSED COPPER, PVC, AND/OR CAST IRON IS ALLOWED.

9. CLEANOUTS SHALL BE THE SAME SIZE AS LINE SERVED, BUT NOT LARGER THAN 4 INCHES, AND SHALL BE PROVIDED AT THE BASE OF EACH SOIL AND WASTE STACK, AT ALL POINTS WHERE DIRECTION CHANGE IS MORE THAN 45 DEGREES, AT MINIMUM INTERVALS OF 50 FEET FOR 4 INCH AND SMALLER PIPING, AT MINIMUM INTERVALS OF 100 FEET FOR PIPING LARGER THAN 4 INCHES, AS REQUIRED BY CODE AND AS INDICATED ON THE DRAWINGS. COVERS SHALL BE SET FLUSH WITH FLOOR OR WALL.
10. PLUMBING VALVES

10.A. PROVIDE SHUT-OFF VALVE AND UNION OR EQUIVALENT AT EACH HOT AND COLD WATER EQUIPMENT CONNECTION. PROVIDE SHUTOFF VALVE ON EACH BRANCH OR RISER THAT SERVES TWO OR MORE PLUMBING FIXTURES.

10.B. GATE VALVES 2-1/2 INCHES AND SMALLER: ALL BRONZE, RISING STEM, SOLID WEDGE DISC. STOCKHAM B-100 OR B-108.

10.C. GLOBE VALVES: ALL BRONZE, RENEWABLE COMPOSITION DISC. STOCKHAM B-16 OR B-14-T.

10.D. CHECK VALVES IN HORIZONTAL PIPES: 2 INCHES AND SMALLER: ALL BRONZE, REGRINDING BRONZE DISC, HORIZONTAL SWING, Y- PATTERN. STOCKHAM B-319OR B-309.

10.E. CHECK VALVES IN VERTICAL PIPES AND PUMP DISCHARGE: SILENT CHECK VALVE WITH SEMI-STEEL BODY, BRONZE TRIM AND STAINLESS STEEL SPRING. METRAFLEX 700 SERIES.

10.F. BALL VALVES MAY BE USED IN LIEU OF GATE VALVES 2 INCHES AND SMALLER. BALL VALVES SHALL HAVE BRONZE BODY, BRONZE BALL AND TFE SEATS AND SEALS. STOCKHAM S-216BRRT OR S-216BRRS.
11. CLEANING AND TESTING

11.A. ALL WATER PIPING, VALVES, ETC. SHALL BE THOROUGHLY FLUSHED OF FOREIGN MATTER AND TESTED FOR LEAKS IN ACCORDANCE WITH THE PLUMBING AND BUILDING CODE, LATEST EDITION. ANY LEAKAGE SHALL BE REPAIRED. DISINFECT DOMESTIC WATER PIPING INCLUDING WATER SERVICE PIPING IN ACCORDANCE WITH AWWA C601.

11.B. ALL DRAIN, WASTE AND VENT PIPING SHALL BE TESTED FOR LEAKS IN ACCORDANCE WITH THE PLUMBING AND BUILDING CODE CODE, LATEST EDITION. NO VISIBLE DROP IN WATER LEVEL WILL BE ACCEPTABLE.



BALZER & ASSOCIATES

PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS
Roanoke / Richmond
New River Valley / Staunton
Harrisonburg / Lynchburg

www.balzer.cc

80 College Street, Suite H
Christiansburg, VA 24073
540.381.4290



CCC PHASE 2
HISTORIC RENOVATION
SPECIFICATIONS

DRAWN BY JNB
DESIGNED BY JNB
CHECKED BY JNB
DATE 04/22/2025
SCALE
REVISIONS

1 CORBIN HARMON DRIVE
FOLASK, VIRGINIA, 24301

P103

PROJECT NO 2322008.00

END OF PLUMBING SPECIFICATIONS

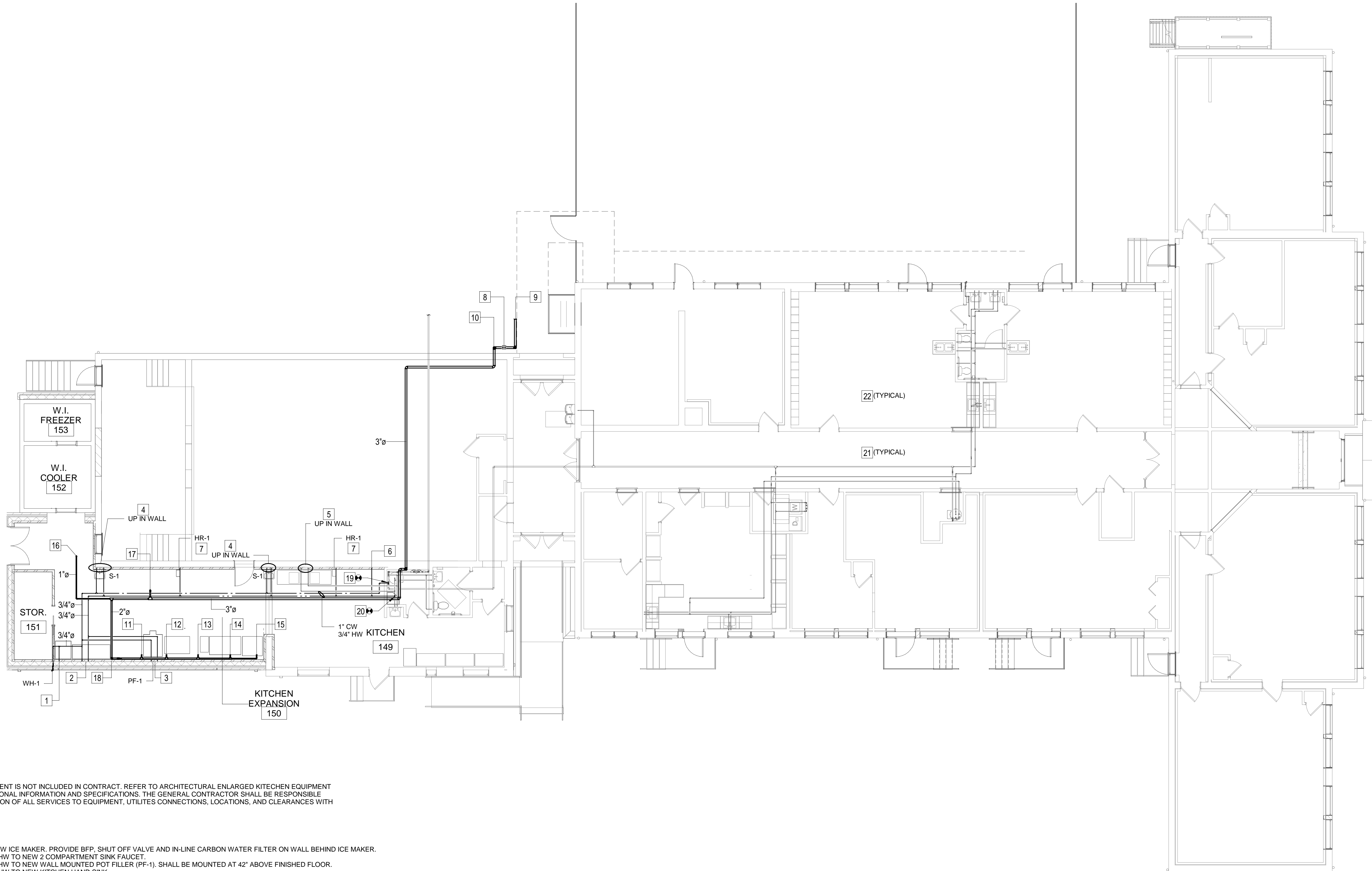


**BALZER
& ASSOCIATES**

PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS
Roanoke / Richmond
New River Valley / Staunton
Harrisonburg / Lynchburg

www.balzer.cc

80 College Street, Suite H
Christiansburg, VA 24073
540.381.4290



GENERAL NOTES:

- KITCHEN EQUIPMENT IS NOT INCLUDED IN CONTRACT. REFER TO ARCHITECTURAL ENLARGED KITCHEN EQUIPMENT PLAN FOR ADDITIONAL INFORMATION AND SPECIFICATIONS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL SERVICES TO EQUIPMENT, UTILITIES CONNECTIONS, LOCATIONS, AND CLEARANCES WITH OWNER.

KEYED NOTES:

- 1/2" CW UP TO NEW ICE MAKER. PROVIDE BFP, SHUT OFF VALVE AND IN-LINE CARBON WATER FILTER ON WALL BEHIND ICE MAKER.
- 1/2" CW AND 1/2" HW TO NEW 2 COMPARTMENT SINK FAUCET.
- 1/2" CW AND 1/2" HW TO NEW WALL MOUNTED POT FILLER (PF-1). SHALL BE MOUNTED AT 42" ABOVE FINISHED FLOOR.
- 1/2" CW AND 1/2" HW TO NEW KITCHEN HAND SINK.
- 1/2" CW AND HW TO EXISTING 3 COMPARTMENT SINK FAUCET.
- 1/2" HW TO NEW DISHWASHER.
- 1/2" HW TO NEW HOSE REEL (HR-1). INSTALL HOSE REEL AT 60" ABOVE FINISHED FLOOR.
- NEW GAS METER AND REGULATOR. REGULATOR DOWNSTREAM OF METER SHALL REDUCE THE GAS PRESSURE FROM 2PSI DOWN TO 12" W.C.
- RELOCATE / PROVIDE NEW NATURAL GAS SERVICE TO THE BUILDING.
- 3" GAS LINE DOWN TO CRAWL SPACE.
- NEW STEAM KETTLE (135 MBH INPUT)
- NEW 48" CHARBROILER (40 MBH INPUT)
- NEW FRYER (120 MBH INPUT)
- NEW 60" RANGE (307 MBH INPUT)
- NEW CONVECTION OVEN (90 MBH INPUT)
- 1" GAS LINE UP TO RTU-1 ON THE ROOF.
- 1-1/2" GAS LINE UP TO MUA-1 ON ROOF.
- 2" GAS DOWN TO NEW KITCHEN EQUIPMENT. PROVIDE SHUT OFF VALVE AND AUTOMATIC SOLENOID SHUT OFF VALVE LINKED TO HOOD FIRE SUPPRESSION SYSTEM. DETECTION OF FIRE SHALL CLOSE OF VALVE.
- CONNECT TO EXISTING CW MAIN. CONTRACTOR TO FIELD VERIFY EXACT TIE-IN LOCATION.
- CONNECT TO EXISTING HW MAIN. CONTRACTOR TO FIELD VERIFY EXACT TIE-IN LOCATION.
- ALL PHASE 1 DOMESTIC CW & HW IS EXISTING TO REMAIN AND SHOWN FOR REFERENCE ONLY (TYPICAL).
- FOR ROOM NAMES NOT SHOWN, REFER TO ARCHITECTURAL DRAWINGS (TYPICAL).

1
P200

FIRST FLOOR PLAN - PLUMBING - WATER

1/8" = 1'-0"

CCC PHASE 2

HISTORIC RENOVATION

FIRST FLOOR PLUMBING - WATER

1 COBBIN HARMON DRIVE
POLASKI, VIRGINIA, 24301

DRAWN BY JNB
DESIGNED BY JNB
CHECKED BY JNB
DATE 04/22/2025
SCALE 1/8" = 1'-0"
REVISIONS

P200

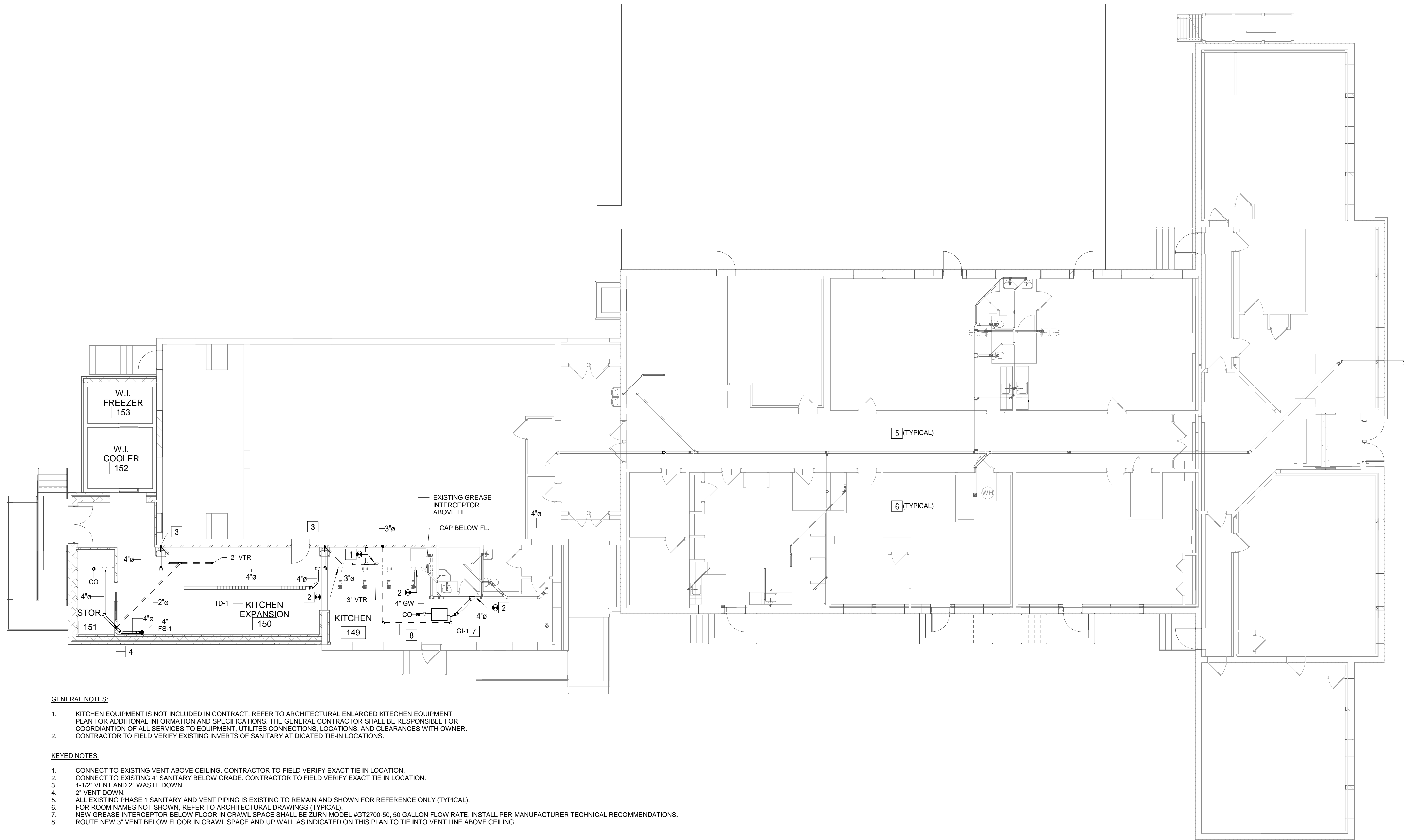
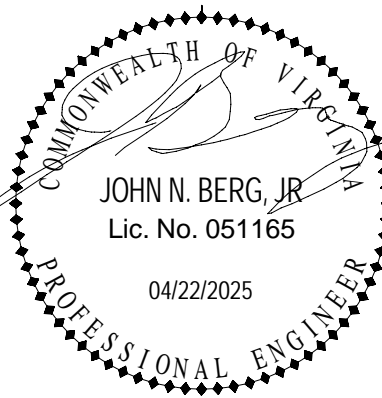
PROJECT NO 23220008.00



**BALZER
& ASSOCIATES**

PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS
Roanoke / Richmond
New River Valley / Staunton
Harrisonburg / Lynchburg

www.balzer.cc
80 College Street, Suite H
Christiansburg, VA 24073
540.381.4290



GENERAL NOTES:

- KITCHEN EQUIPMENT IS NOT INCLUDED IN CONTRACT. REFER TO ARCHITECTURAL ENLARGED KITCHEN EQUIPMENT PLAN FOR ADDITIONAL INFORMATION AND SPECIFICATIONS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL SERVICES TO EQUIPMENT, UTILITIES CONNECTIONS, LOCATIONS, AND CLEARANCES WITH OWNER.
- CONTRACTOR TO FIELD VERIFY EXISTING INVERTS OF SANITARY AT DICTATED TIE-IN LOCATIONS.

KEYED NOTES:

- CONNECT TO EXISTING VENT ABOVE CEILING. CONTRACTOR TO FIELD VERIFY EXACT TIE IN LOCATION.
- CONNECT TO EXISTING 4" SANITARY BELOW GRADE. CONTRACTOR TO FIELD VERIFY EXACT TIE IN LOCATION.
- 1-1/2" VENT AND 2" WASTE DOWN.
- 2" VENT DOWN.
- ALL EXISTING PHASE 1 SANITARY AND VENT PIPING IS EXISTING TO REMAIN AND SHOWN FOR REFERENCE ONLY (TYPICAL).
- FOR ROOM NAMES NOT SHOWN, REFER TO ARCHITECTURAL DRAWINGS (TYPICAL).
- NEW GREASE INTERCEPTOR BELOW FLOOR IN CRAWL SPACE SHALL BE ZURN MODEL #GT2700-50, 50 GALLON FLOW RATE. INSTALL PER MANUFACTURER TECHNICAL RECOMMENDATIONS.
- ROUTE NEW 3" VENT BELOW FLOOR IN CRAWL SPACE AND UP WALL AS INDICATED ON THIS PLAN TO TIE INTO VENT LINE ABOVE CEILING.

1
P300

FIRST FLOOR PLAN - PLUMBING - WASTE & VENT

1/8" = 1'-0"

CCC PHASE 2

HISTORIC RENOVATION

FIRST FLOOR PLUMBING - WASTE & VENT

1 COBBIN HARRISON DRIVE
POLASKI, VIRGINIA, 24301

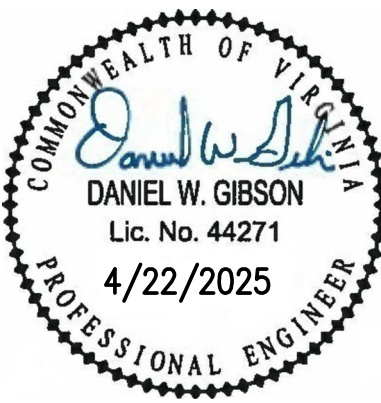
DRAWN BY JNB
DESIGNED BY JNB
CHECKED BY JNB
DATE 04/22/2025
SCALE 1/8" = 1'-0"
REVISIONS

P300

PROJECT NO 23220008.00



BALZER & ASSOCIATES
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS
Roanoke / Richmond
New River Valley / Staunton
Harrisonburg / Lynchburg
www.balzer.cc

















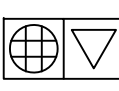

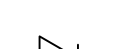

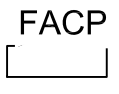

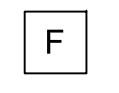





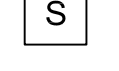

CCC PHASE 2

HISTORIC RENOVATION

ELECTRICAL LEGEND AND GENERAL NOTES

1 COREIN-HARMON DRIVE
PULASKI, VIRGINIA 24301

| | |
|-------------|--------------|
| DRAWN BY | DWG |
| DESIGNED BY | DWG |
| CHECKED BY | |
| DATE | 04/22/25 |
| SCALE | AS INDICATED |
| REVISIONS | |

| ELECTRICAL LEGEND | | | GENERAL NOTES | |
|---|--|---|--|---|
|  | PANELBOARD, 208Y/120-VOLT, 3-PHASE, 4-WIRE, MOUNTING HEIGHT = 6'-0" TO TOP. SEE PANELBOARD SCHEDULES. |  | 2X4 GRID MOUNTED LIGHTING FIXTURE WITH FLAT LENS, TYPE 'A' | <div>1. MOUNTING HEIGHT OF LIGHTING FIXTURES IS TO BOTTOM OF FIXTURE AND AWAY FROM FINISHED FLOOR OR GRADE.</div> <div>2. MOUNT OUTLET BOXES SO THAT NONE OCCUR BACK TO BACK IN WALLS.</div> <div>3. MECHANICAL EQUIPMENT IS SHOWN IN APPROXIMATE LOCATIONS. FOR EXACT LOCATIONS OF MECHANICAL EQUIPMENT AND PIPING, SEE MECHANICAL DRAWINGS.</div> <div>4. FOR 120 VOLT, 20 AMP BRANCH CIRCUITS USE 12 AWG UP TO 60 FEET, 10 AWG FOR 61-95 FEET, AND 8 AWG FOR CIRCUITS LONGER THAN 96 FEET. WHETHER INDICATED IN PANEL SCHEDULES OR NOT. CONDUCTORS SHALL BE SAME SIZE FOR ENTIRE LENGTH OF RUN.</div> <div>5. REVISE PANELBOARD SCHEDULES ON AS-BUILT-DRAWING AND PANEL DIRECTORIES TO REFLECT FINAL INSTALLATION CONDITIONS.</div> <div>6. SEAL PENETRATIONS THROUGH FLOORS OR FIRE WALLS TO MAINTAIN THE INTEGRITY OF THE FIRE AND ACOUSTIC RATINGS OF THE WALLS AND FLOORS.</div> <div>7. LOCATE ALL RACEWAYS TO AVOID INTERFERENCE WITH DUCTS, PIPES, MECHANICAL EQUIPMENT, WITH REMOVAL OF CEILING TILES, OR WITH ACCESS TO EQUIPMENT WHICH REQUIRES PERIODIC ADJUSTMENT OR MAINTENANCE.</div> <div>8. PROVIDE NAMEPLATES ON THE EXTERIOR OF ALL ELECTRICAL PANELS, DISCONNECTS AND ENCLOSURES WITH THE DEVICE ID, RATING, POWER SOURCE, INSTALLATION DATE, AND BY WHICH SWITCH OR STARTER.</div> <div>9. FIRE ALARM SYSTEM TO BE INSTALLED COMPLETE AND TO ALL APPLICABLE CODES.</div> <div>10. PROVIDE 4' x 8' x 3/4" PAINTED PLYWOOD FOR BACKBOARD IN ELECTRICAL ROOM AT LOCATION OF DATA NETWORK COMPONENTS.</div> <div>11. LIGHT FIXTURE TYPE IS SHOWN ONLY ONCE AS TYPICAL FOR THE ENTIRE ROOM UNLESS SPECIFICALLY INDICATED OTHERWISE.</div> <div>12. UNLESS INDICATED OTHERWISE, SIZE CONDUITS IN ACCORDANCE WITH NFPA 70.</div> <div>13. COORDINATE WITH THE MECHANICAL CONTRACTOR TO ENSURE ALL WORKING CLEARANCE AND DEDICATED WORKING SPACE OF PANELBOARDS.</div> <div>14. ALL UNDERGROUND CONDUITS NEED PULL CORDS / ROPES SUITABLE FOR WIRE TO BE INSTALLED.</div> <div>15. PROVIDE A LABEL ON ALL RECEPTACLE FACE PLATES INDICATING WHICH PANELBOARD AND CIRCUIT FEEDS THAT RECEPTACLE.</div> <div>16. COORDINATE WITH ACCESS CONTROL SYSTEM AND PROVIDE ALL NECESSARY CONNECTIONS FOR CONDUIT AND WIRE.</div> <div>17. GROUNDING CONDUCTORS ARE NOT INDICATED IN BRANCH CIRCUIT RACEWAYS. PROVIDE GROUND CONDUCTORS AS REQUIRED BY NEC.</div> <div>18. ALL LIGHT FIXTURE MANUFACTURES ARE LISTED TO ESTABLISH STANDARD REQUIREMENTS FOR PERFORMANCE, MATERIAL AND APPEARANCE. PROVIDE SPECIFIED FIXTURE OR EQUAL. COORDINATE ALL FIXTURE FINISHES WITH ARCHITECT.</div> <div>19. CEILING GRID MOUNTED DEVICES ARE TO BE CENTERED WITHIN CEILING GRID TILES. INCLUDING, BUT NOT LIMITED TO OCCUPANCY SENSORS AND FIRE ALARM DEVICES.</div> <div>20. OCCUPANCY SENSORS SHOULD CONTROL ALL LIGHTING IN ROOMS, UNLESS INDICATED OTHERWISE.</div> <div>21. PROVIDE PLASTIC BUSHING ON THE END OF ALL CONDUIT.</div> <div>22. NO SHARING OF NEUTRAL CONDUCTORS.</div> <div>23. COORDINATE WITH MECHANICAL CONTRACTOR TO PROVIDE POWER TO MOTORIZED DAMPERS OR VALVES WHERE REQUIRED. USE #12 WIRE FROM SPARE 20 AMP BREAKER IN NEAREST NORMAL POWER ELECTRICAL PANEL.</div> <div>24. COORDINATE WITH UTILITY FOR MAXIMUM AVAILABLE FAULT CURRENT AT SERVICE ENTRANCE. PROVIDE RATING TO ENGINEER FOR APPROVAL PRIOR TO PURCHASING EQUIPMENT. FIELD MARK SERVICE ENTRANCE EQUIPMENT WITH RATING RECEIVED FROM UTILITY AND DATE CALCULATED.</div> |
|  | DISCONNECT SWITCH, EXTERNALLY OPERATED, 250V, 3-POLE UNLESS OTHERWISE NOTED. NOTATION INDICATES NUMBER OF POLES AND AMPERAGE CAPACITY. 'NF' INDICATES NON-FUSED. COORDINATE WITH MECHANICAL CONTRACTOR FOR DISCONNECTS TO BE PROVIDED WITH EQUIPMENT. |  | 2X2 GRID MOUNTED LIGHTING FIXTURE WITH FLAT LENS, TYPE 'A2' | |
|  | BRANCH CIRCUIT HOME RUN TO PANELBOARD. NOTATION INDICATES PANELBOARD & BRANCH CIRCUIT CONNECTION. |  | LINEAR PENDANT LIGHTING FIXTURE, TYPE 'B' | |
|  | JUNCTION BOX. SEE NOTATION AND PANEL SCHEDULE FOR CONNECTED EQUIPMENT. |  | 4' LINEAR STRIP UTILITY LIGHTING FIXTURE, TYPE 'C' OR 'D' | |
|  | DUPLEX WALL RECEPTACLE, MOUNTING HEIGHT = 42". 'GF' SUBSCRIPT INDICATES GROUND FAULT, 'WP' INDICATES GFI WEATHERPROOF WITH IN-USE WEATHERPROOF COVER, 'EWC' INDICATES GFI BEHIND ELECTRIC WATER COOLER, 'CS' INDICATES NON-GFI WEATHERPROOF FOR INSTALL IN CRAWL SPACE AND CONNECTED TO GFCI BREAKER, '"" INDICATES MOUNTED HEIGHT = 8" ABOVE COUNTER, 'USB' INDICATES DUPLEX WITH USB PORTS, 'REF' INDICATES REFRIGERATOR RECEPTACLE MOUNTED 42" AFF. |  | AUDITORIUM DECORATIVE LIGHTING FIXTURE, TYPE 'E' | |
|  | SPECIAL PURPOSE RECEPTACLE. COORDINATE WITH EQUIPMENT PROVIDER FOR CORRECT CORD AND PLUG COMBINATION. |  | EXTERIOR CANOPY SURFACE MOUNTED LIGHTING FIXTURE WITH BATTERY BACKUP, TYPE 'F' | |
|  | CEILING MOUNTED RETRACTABLE CORD REEL DUPLEX RECEPTACLE. |  | CRAWL SPACE UTILITY LIGHTING FIXTURE, TYPE 'G' | |
|  | QUAD-PLEX RECEPTACLE AND 2-JACK DATA OUTLET LOCATED IN VOLTAGE DIVIDED FLOOR BOX. COORDINATE COVER FINISH WITH ARCHITECT. |  | EMERGENCY LIGHTS WITH BATTERY BACKUP, SURFACE WALL MOUNTED, TYPE 'W'. | |
|  | 1-JACK DATA SYSTEM OUTLET, MOUNTING HEIGHT = 42" UNLESS INDICATED OTHERWISE. PROVIDE 1" CONDUIT FROM BOX TO ABOVE ACCESSIBLE CEILING. PROVIDE TWO CAT-6 CABLES BACK TO NETWORK SWITCH IN ELECTRICAL ROOM. |  | EXIT LIGHTING FIXTURE WITH BATTERY BACKUP AND EMERGENCY LIGHT COMBO, SURFACE WALL MOUNTED, DIRECTIONAL ARROWS AS INDICATED, TYPE 'X' | |
|  | FIRE ALARM SYSTEM CONTROL PANEL. MOUNTING HEIGHT = 5'-6" TO TOP. |  | EXIT LIGHTING FIXTURE WITH BATTERY BACKUP, SURFACE CEILING MOUNTED, DIRECTIONAL ARROWS AS INDICATED, TYPE 'X' | |
|  | FIRE ALARM SYSTEM MANUAL PULL STATION. MOUNTING HEIGHT = 4'-0" TO TOP. |  | EMERGENCY REMOTEHEAD CONNECTED TO NEAREST INTERIOR EXIT SIGN, TYPE 'X-R' | |
|  | FIRE ALARM SYSTEM ALARM HORN, WITH VISUAL ALARM, CEILING MOUNTED. |  | DUAL TECHNOLOGY, OCCUPANCY SENSOR FOR LIGHTING CONTROL. | |
|  | FIRE ALARM SYSTEM VISUAL ALARM, CEILING MOUNTED. |  | SINGLE-POLE SWITCH, MOUNTING HEIGHT = 4'-0" TO TOP. LOWER CASE SUBSCRIPT, WHEN USED, INDICATES FIXTURES CONTROLLED. '3' SUBSCRIPT INDICATES THREE-WAY SWITCH, '4' INDICATES FOUR-WAY SWITCH, 'M' INDICATES MOTION CONTROLLED, 'D' INDICATES DIMMER SWITCH. | |
|  | CEILING MOUNTED SMOKE DETECTOR. |  | LIGHTING FIXTURE TYPE. SEE LIGHTING FIXTURE SCHEDULE. | |
| | | | LEGEND NOTES | |
| | | | 1 ALL MOUNTING HEIGHTS ARE TO CENTER OF DEVICE UNLESS INDICATED OTHERWISE. | |
| | | | 2 'NL' SUBSCRIPT BY LIGHTING FIXTURE INDICATES NIGHTLIGHT TO REMAIN UNSWITCHED. | |

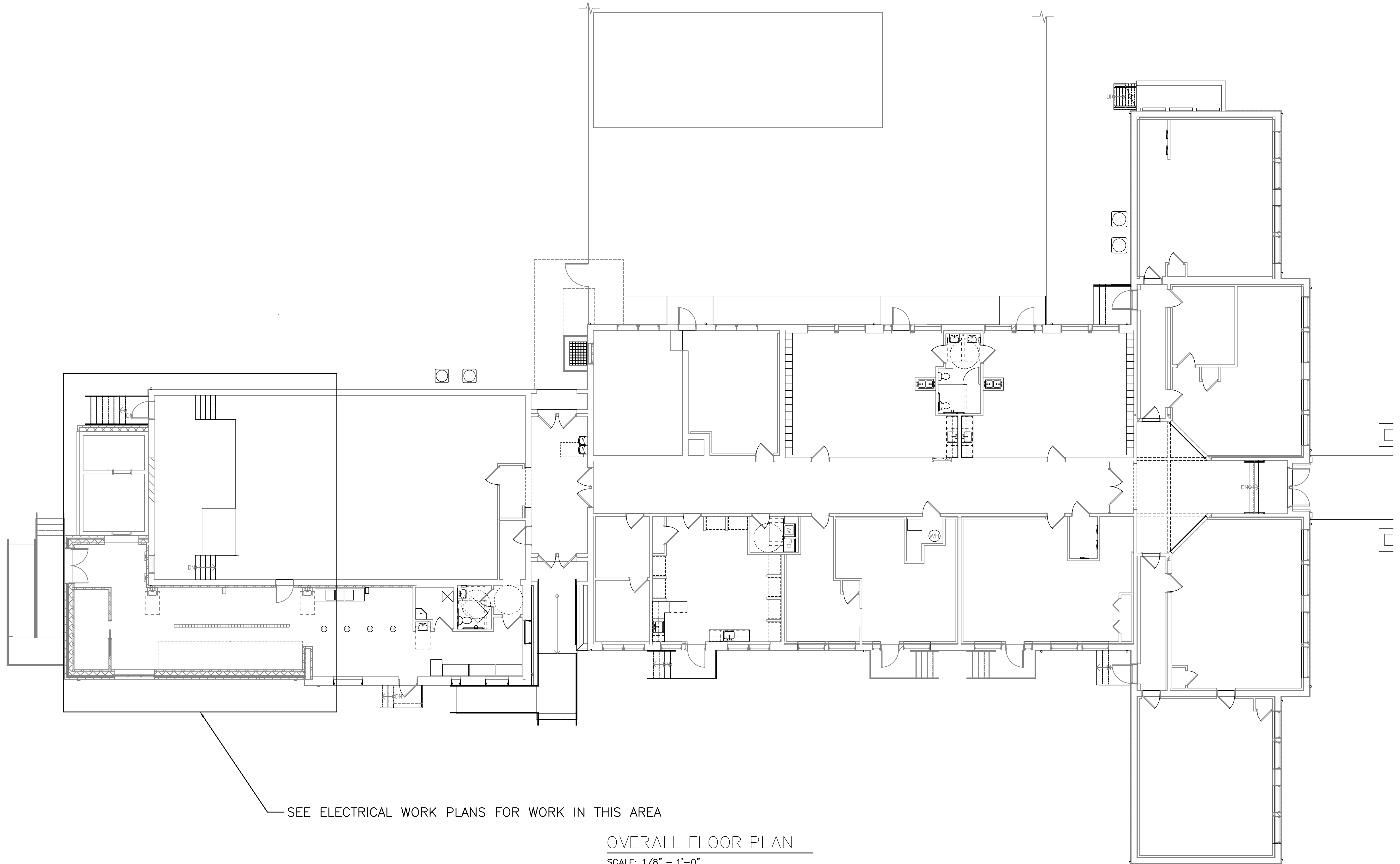
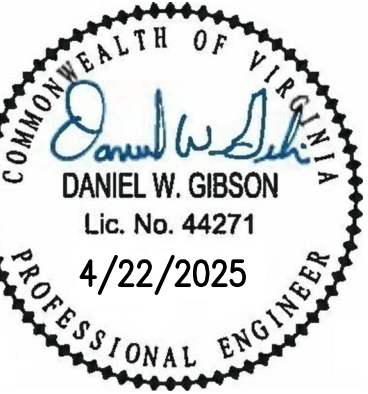
| ELECTRICAL ABBREVIATIONS | | | |
|--------------------------|--------------------------|---------|--------------------|
| AFI | ABOVE FINISHED | C | GROUND |
| C | CONDUIT | GF / GI | GROUND FAULT |
| CE | CIRCUIT | GTI | GENERATOR TRANSFER |
| ELEC | ELECTRICAL | JB | JUNCTION |
| EMC | EMERGENCY | LTC | LIGHTING |
| EQUI | EQUIPMENT | MECI | MECHANICAL |
| EWC | ELECTRIC WATER | MCI | MAIN CIRCUIT |
| FA | FIRE | MLC | MAIN LUGS |
| FAL | FIRE ALARM | NF | NON-FUSED |
| FACP | FIRE ALARM CONTROL PANEL | NL | NIGHTLIGHT |

| CODES & STANDARDS | |
|---|------|
| NFPA 70: NATIONAL ELECTRICAL CODE | 2020 |
| NFPA 72: NATIONAL FIRE ALARM AND SIGNALING CODE | 2016 |
| VECC: VIRGINIA ENERGY CONSERVATION CODE | 2021 |



**BALZER
& ASSOCIATES**
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

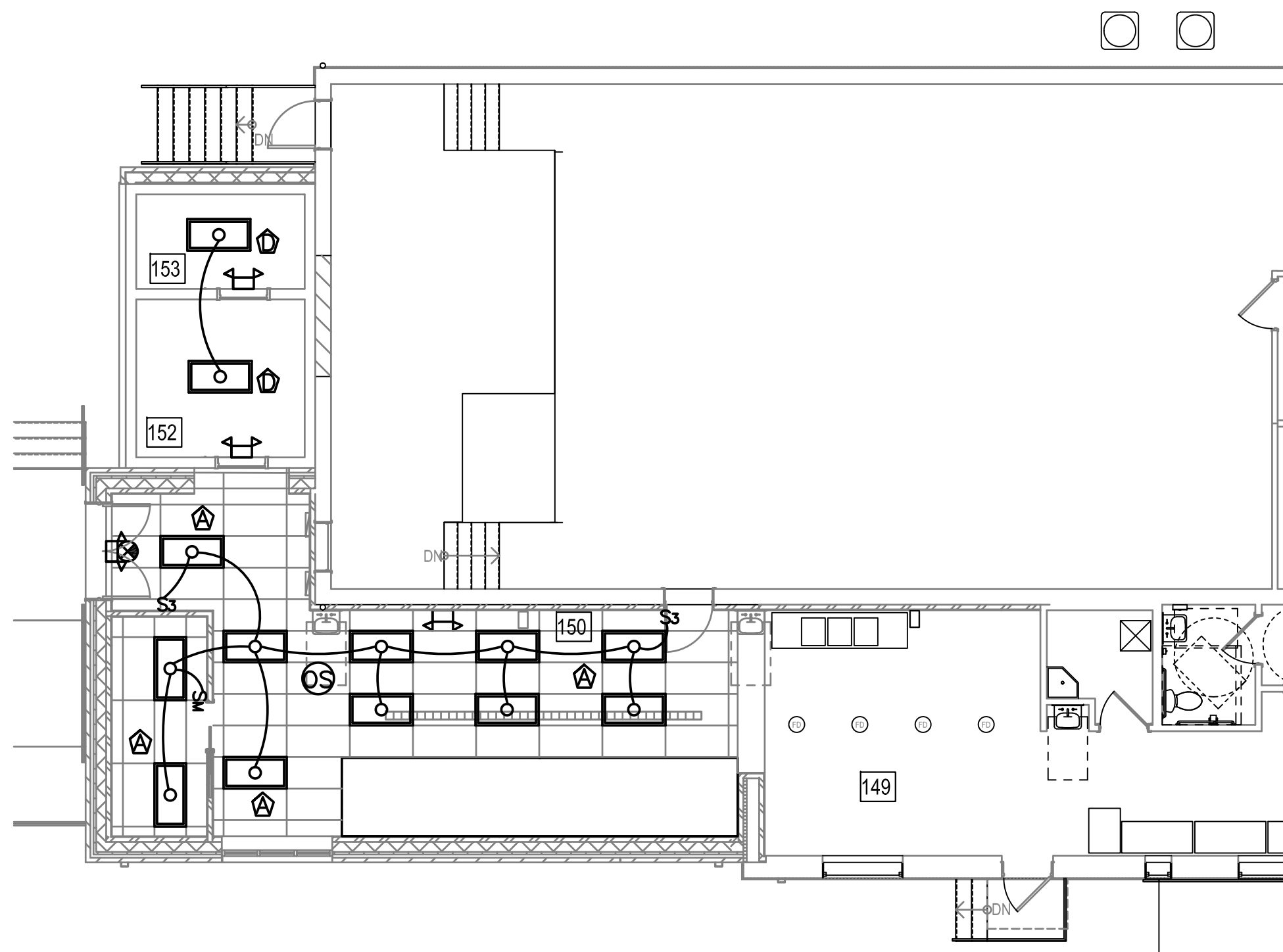
Roanoke / Richmond
New River Valley / Staunton
Harrisonburg / Lynchburg
www.balzer.cc



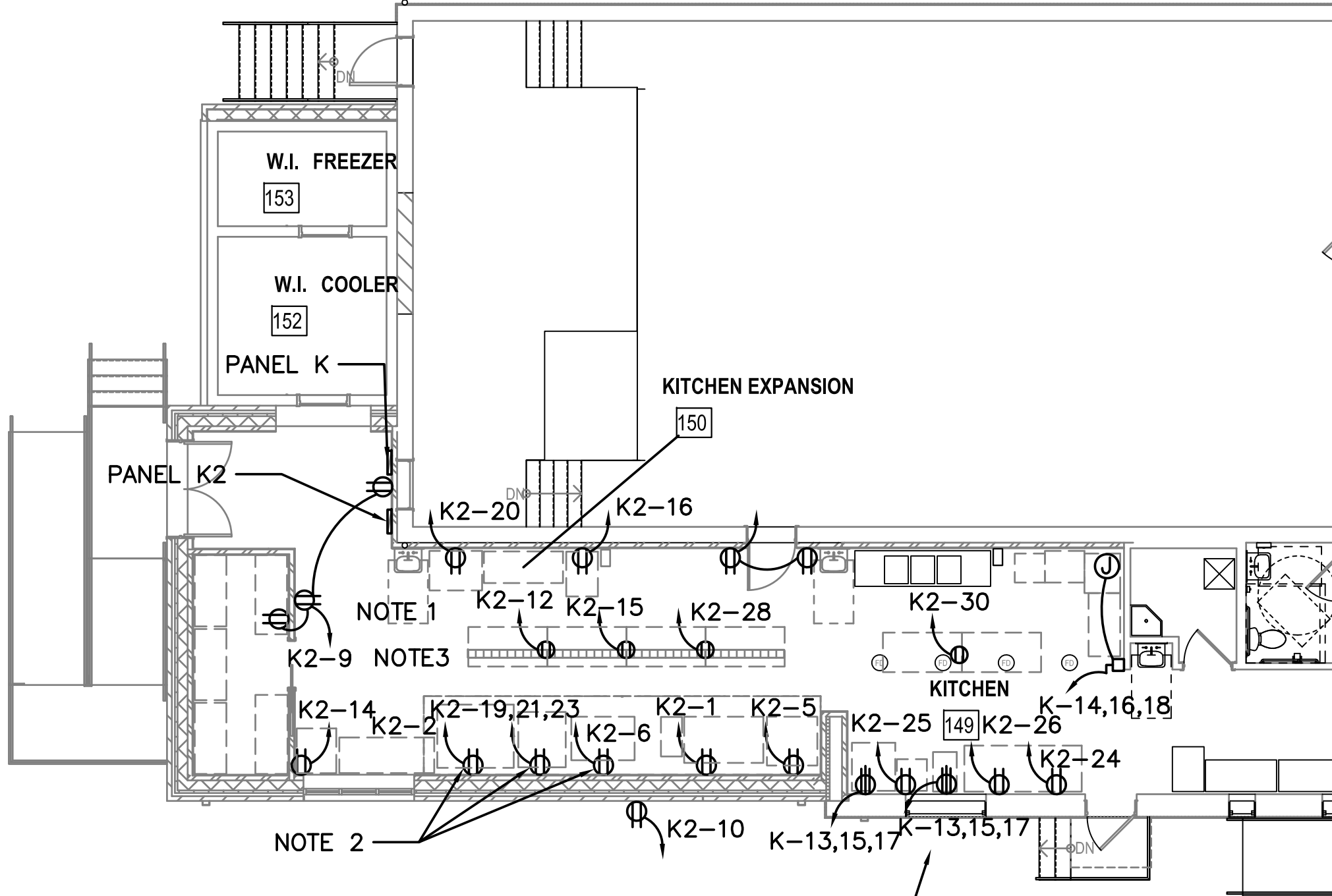
CCC PHASE 2
HISTORIC RENOVATION
OVERALL FLOOR PLAN

1 COREIN-HARMON DRIVE
PULASKI, VIRGINIA 23001

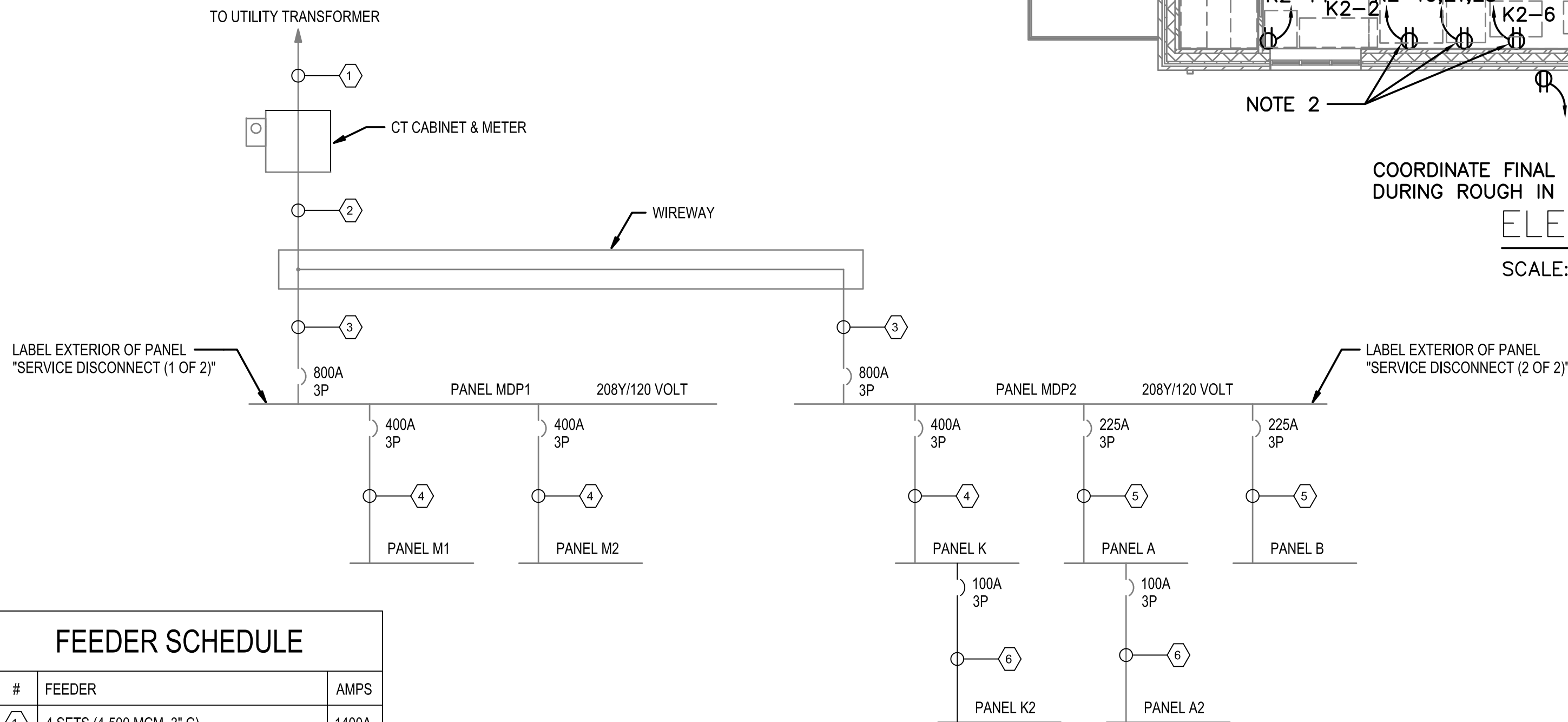
| | |
|-------------|--------------|
| DRAWN BY | DWG |
| DESIGNED BY | DWG |
| CHECKED BY | |
| DATE | 04/22/25 |
| SCALE | AS INDICATED |
| REVISIONS | |



ELECTRICAL LIGHTING PLAN
SCALE: 1/8" - 1'-0"



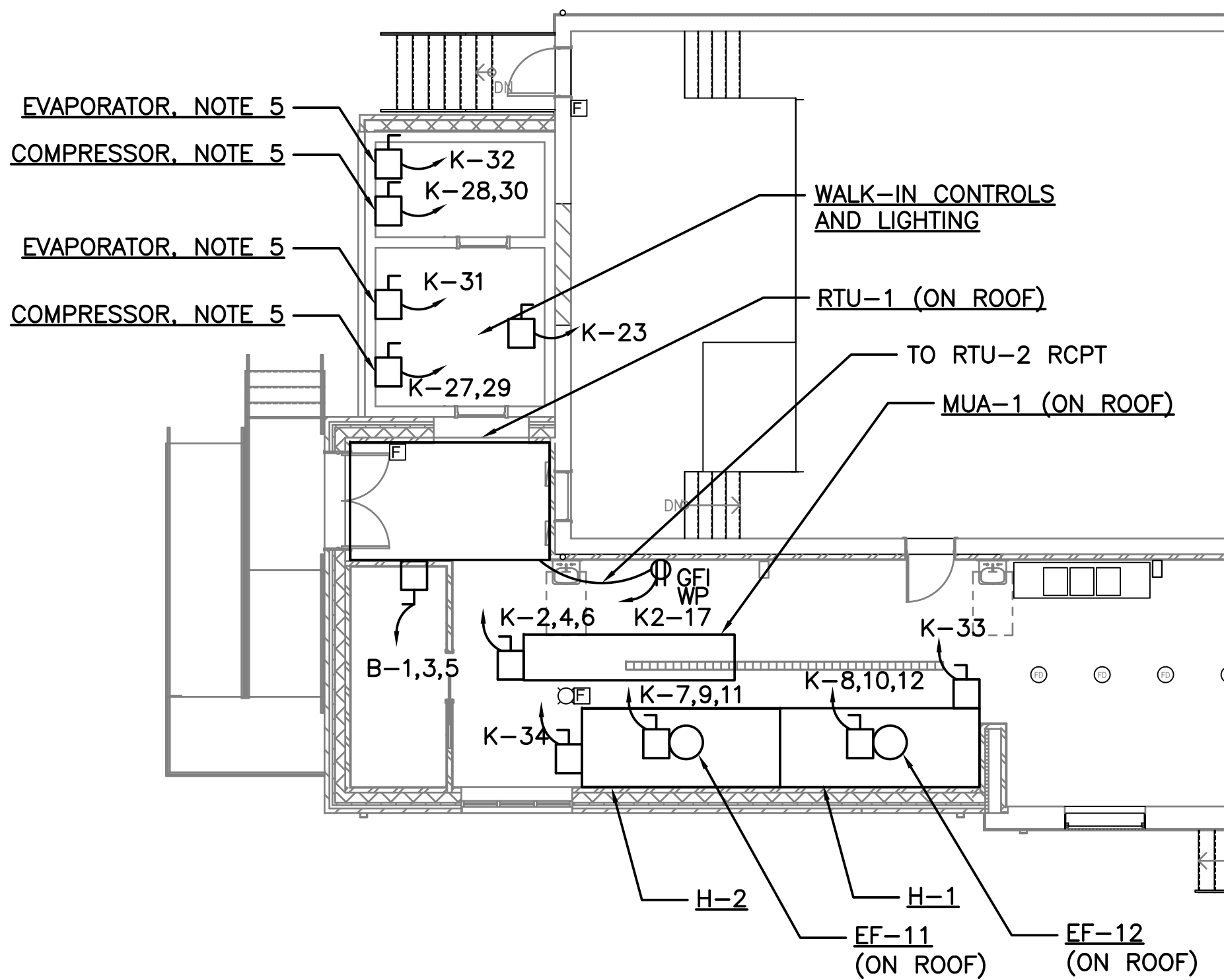
ELECTRICAL POWER PLAN
SCALE: 1/8" - 1'-0"



ONE LINE DIAGRAM
SCALE: NONE

| FEEDER SCHEDULE | | |
|-----------------|------------------------------------|-------|
| # | FEEDER | AMPS |
| 1 | 4 SETS (4-500 MCM, 3" C) | 1400A |
| 2 | 4 SETS (4-500 MCM, 1-#3/0 G, 3" C) | 1400A |
| 3 | 3 SETS (4-300 MCM, 1-#1/0 G, 3" C) | 800A |
| 4 | 2 SETS (4-#3/0, 1-#3 G, 2" C) | 400A |
| 5 | 4-#4/0, 1-#4 G, 2 1/2" C | 225A |
| 6 | 4-#3, 1-#8 G, 1 1/4" C | 100A |

| LIGHTING FIXTURE SCHEDULE | | | | | | | | |
|---------------------------|--------------|-------|-----------|--------|-------|-------|----------|-------------------------------------|
| FIXTURE TYPE | MANUFACTURER | MODEL | LAMP-TYPE | LUMENS | WATTS | VOLTS | MOUNTING | DESCRIPTION |
| A | LITHONIA | CPX | LED | 4800 | 40 | 120 | GRID | 2X4 TROFFER WITH FLAT ACRYLIC LENS. |
| D | LITHONIA | CSV | LED | 4800 | 42 | 120 | GRID | 4' VAPORTIGHT COLD WEATHER |



ELECTRICAL EQUIPMENT PLANS
SCALE: 1/8" - 1'-0"

| NEW PANEL K2 | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|------|------|----|----------|----------------------------|----------------------|-----|------------------------|------|------------------|------|--|------|----|-------------------------|---------------------|-----|----------------------|------|-----|-----|--|--|
| VOLTAGE: 208Y/120 | | | | PHASE: 3 | | | | BUS AMPS: 100A | | | | <div><div>X</div>SURFACE MOUNTED</div> | | | | KAIC RATING: 22,000 | | | | | | | |
| | | | | WIRE: 4 | | | | MAIN BREAKER AMPS: MLO | | | | <div><div></div>FLUSH MOUNTED</div> | | | | | | | | | | | |
| CT | BRKR | WIRE | | + | CIRCUIT DESCRIPTION | LOAD - KVA | | | 3 PH | CT | BRKR | WIRE | | + | CIRCUIT DESCRIPTION | LOAD - KVA | | | 3 PH | | | | |
| NO. | P | AMPS | NO | | | SZ | PHA | PHB | | PHC | NO. | P | AMPS | | | NO | SZ | PHA | | PHB | PHC | | |
| 1 | 1 | 20 | 2 | 12 | RCPT CONVCT OVN SHUNT TRIP | 0.3 | | | | 2 | 1 | 20 | 2 | 12 | RCPT STEAM KETTLE SHUNT | 0.3 | | | | | | | |
| 3 | 1 | | | | RCPT CONVCT OVN SHUNT TRIP | | | 1.0 | | 4 | 1 | 20 | | | RCPT CHAR GRILLR SHUNT | | | | 0.2 | | | | |
| 5 | 1 | 20 | 2 | 12 | RCPT KIT CHN | | 0.5 | | | 6 | 1 | 20 | 2 | 12 | RCPT KIT CHN UTL RR | | | | 0.7 | | | | |
| 7 | 1 | | | | RCPT KIT CHN 149 | 0.2 | | | | 8 | 1 | 20 | | | RCPT KIT CHN UTL RR | 1.4 | | | 0.2 | | | | |
| 9 | 1 | 20 | 2 | 12 | RCPT KIT CHN 149 | | | 0.2 | | 10 | 1 | 20 | 2 | 12 | RCPT KIT CHN UTL RR | | | | 0.7 | | | | |
| 11 | 1 | 20 | 2 | 12 | RCPT KIT CHN 149 | | | | 0.4 | 12 | 1 | 20 | 2 | 12 | RCPT KIT CHN UTL RR | | | | 0.2 | | | | |
| 13 | 1 | 20 | 2 | 12 | RCPT KIT CHN 149 | | | | | 14 | 1 | 20 | 2 | 12 | RCPT KIT CHN UTL RR | | | | 0.2 | | | | |
| 15 | 1 | 20 | 2 | 12 | RCPT KIT CHN 149 | | | | | 16 | 1 | 20 | 2 | 12 | RCPT KIT CHN UTL RR | | | | 0.2 | | | | |
| 17 | 1 | 20 | 2 | 12 | RCPT KIT CHN 149 | | | | | 18 | 1 | 20 | 2 | 12 | RCPT KIT CHN UTL RR | | | | 0.2 | | | | |
| 19 | 1 | 20 | 2 | 12 | RCPT KIT CHN 149 | | | | | 20 | 1 | 20 | 2 | 12 | RCPT KIT CHN UTL RR | | | | 0.2 | | | | |
| 21 | 1 | 20 | 2 | 12 | RCPT KIT CHN 149 | | | | | 22 | 1 | 20 | 2 | 12 | RCPT KIT CHN UTL RR | | | | 0.2 | | | | |
| 23 | 1 | 20 | 2 | 12 | RCPT KIT CHN 149 | | | | | 24 | 1 | 20 | 2 | 12 | RCPT KIT CHN UTL RR | | | | 0.2 | | | | |
| 25 | 1 | 20 | 2 | 12 | RCPT KIT CHN 149 | | | | | 26 | 1 | 20 | 2 | 12 | RCPT KIT CHN UTL RR | | | | 0.2 | | | | |
| 27 | 1 | 20 | 2 | 12 | RCPT KIT CHN 149 | | | | | 28 | 1 | 20 | 2 | 12 | RCPT KIT CHN UTL RR | | | | 0.2 | | | | |
| 29 | 1 | 20 | 2 | 12 | RCPT KIT CHN 149 | | | | | 30 | 1 | 20 | 2 | 12 | RCPT KIT CHN UTL RR | | | | 0.2 | | | | |
| 31 | 1 | 20 | 2 | 12 | RCPT KIT CHN 149 | | | | | 32 | 1 | 20 | 2 | 12 | RCPT KIT CHN UTL RR | | | | 0.2 | | | | |
| 33 | 1 | 20 | 2 | 12 | RCPT KIT CHN 149 | | | | | 34 | 1 | 20 | 2 | 12 | RCPT KIT CHN UTL RR | | | | 0.2 | | | | |
| 35 | 1 | 20 | 2 | 12 | RCPT KIT CHN 149 | | | | | 36 | 1 | 20 | 2 | 12 | RCPT KIT CHN UTL RR | | | | 0.2 | | | | |
| 37 | 1 | 20 | 2 | 12 | RCPT KIT CHN 149 | | | | | 38 | 1 | 20 | 2 | 12 | RCPT KIT CHN UTL RR | | | | 0.2 | | | | |
| 39 | 1 | 20 | 2 | 12 | RCPT KIT CHN 149 | | | | | 40 | 1 | 20 | 2 | 12 | RCPT KIT CHN UTL RR | | | | 0.2 | | | | |
| 41 | 1 | 20 | 2 | 12 | RCPT KIT CHN 149 | | | | | 42 | 1 | 20 | 2 | 12 | RCPT KIT CHN UTL RR | | | | 0.2 | | | | |
| TOTAL LEFT SIDE | | | | | | 1.7 | 1.7 | 3.1 | 0.0 | TOTAL RIGHT SIDE | | | | | | 3.1 | 2.9 | 3.4 | 0.0 | | | | |
| TOTAL RIGHT SIDE | | | | | | 3.1 | 2.9 | 3.4 | 0.0 | TOTAL LEFT SIDE | | | | | | 1.7 | 1.7 | 3.1 | 0.0 | | | | |
| TOTAL | | | | | | 4.8 | 4.6 | 6.5 | 0.0 | TOTAL | | | | | | 4.8 | 4.6 | 6.5 | 0.0 | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |
| TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | | TOTAL CONNECTED LOAD | | | | | |

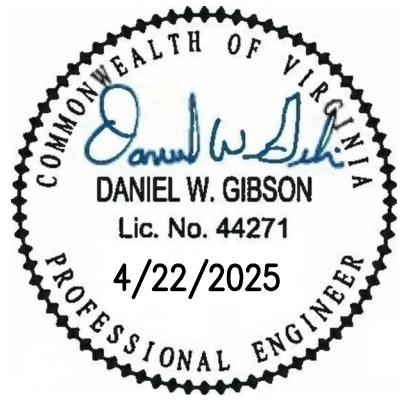
| | |
|---|--|
| SECTION 16000 | |
| ELECTRICAL SPECIFICATIONS | |
| PART 1 - GENERAL | |
| 1.1 DESCRIPTION OF WORK | |
| Provide new lighting, power, data and low voltage systems as indicated on the plans. | |
| 1.2 QUALITY ASSURANCE | |
| A. General | |
| a. Comply with IEEE C2, "National Electrical Safety Code". | |
| b. IEEE Compliance: Comply with applicable Institute of Electrical and Electronics Engineers, Inc. standards pertaining to generator construction. | |
| c. NEC Compliance: Comply with NFPA 70, "National Electrical Code" as applicable to construction and installation of products required in this specification. | |
| d. UL and NEMA Compliance and Labeling: Provide products which have been labeled by Underwriters Laboratories and have been certified to comply with UL requirements. | |
| e. IEEE Compliance: Comply with STD 241, "IEEE Recommended Practice for Electrical Power Systems in Commercial Buildings" pertaining to communication systems. | |
| B. MOTOR CONTROLLERS | |
| a. UL and NEMA Compliance and Labeling: Provide products which have been labeled by Underwriters' Laboratories and have been certified to comply with UL and NEMA. | |
| C. LIGHTING | |
| a. NEMA Compliance: Comply with applicable requirements of NEMA Std.s. Pub/No.'s LE 1 and LE 2 pertaining to lighting equipment. | |
| b. UL Compliance: Comply with UL standards, including UL 486A and B, pertaining to lighting fixtures. Provide lighting fixtures and components which are UL_listed and labeled. Provide exterior fixtures with "Suitable for Wet Location" label. | |
| c. CBM Labels: Provide fluorescent lamp ballasts which comply with Certified Ballast Manufacturers Association standards and carry the CBM label. | |
| 1.3 COORDINATION OF ELECTRICAL WORK | |
| A. General: Refer to the division sections for general coordination requirements applicable to the entire work. It is recognized that the contract documents are diagrammatic in showing certain physical relationships which must be established within the electrical work and in its interface with other work including utilities and mechanical work and that such establishment is the exclusive responsibility of the Contractor. | |
| a. Arrange electrical work in a neat, well organized manner with conduit and similar services running parallel with primary lines of the building construction and with the maximum headroom possible, but a minimum 7'-0" overhead clearance. | |
| b. Locate operating and control equipment properly to provide easy access and arrange entire electrical work with adequate access for operation and maintenance. | |
| c. Advise other trades of openings required in their work for the subsequent move_in of large units of electrical equipment. | |
| d. Coordinate all work, including power outages, with Owner's Schedule of Operation. | |
| B. Product Handling: Space at the project for storage of materials and products is limited. Coordinate the deliveries of electrical materials and products with the scheduling and sequencing of the work so that storage requirements at the project are minimized. In general, do not deliver individual items of electrical equipment to the project substantially ahead of the time of installation. | |
| 1.3 ELECTRICAL SYSTEM IDENTIFICATION | |
| A. Conduit Systems: Provide adequate marking of primary conduits which are exposed or concealed in accessible spaces, to distinguish each run as either a power or signal/communication conduit. Except as otherwise indicated, use orange banding with black lettering. Provide self_adhesive or snap_on type plastic markers. Indicate voltage ratings of conductors where above 240 V. Locate markers at ends of conduit runs, near switches and other control devices and near items of equipment served by the conductors. Switch_leg conduit and short branches for power connections need not be marked, except where conduit is larger than 1 inch. Label all junction boxes with branch circuit numbers terminated within. | |
| B. Identification Labels and Warning Signs: Provide engraved plastic laminate or baked enamel labels on major units of electrical equipment including switchboards, panelboards, motor controllers, disconnect switches, signal and similar systems. Label shall include equipment identification mark and voltage characteristics and shall be melamine plastic, 0.125_inch thick, white with black center core. Provide warning signs where there is hazardous exposure or danger associated with access to or operation of electrical facilities. Provide text of sufficient clarity and lettering of sufficient size, minimum 0.25 inch nominal block style, to convey adequate information at each location; mount permanently in an appropriate and effective location. | |
| 1.4 PAINTING ELECTRICAL WORK | |
| A. General: Except as otherwise indicated, comply with the applicable provisions of Division 9 for electrical_work painting. Electrical equipment shall have factory_applied painting systems which shall meet the requirements of NEMA ICS6. The work of this article shall include general field painting of electrical work. | |
| a. Coordinate the painting with the painting of other work of a similar nature and comply with indicated color and color matching requirements. Except as otherwise indicated, paint surfaces of electrical work which would normally be painted in the application and exposure indicated. | |
| B. Do not paint over nameplates on equipment, sliding/rotating shaft surfaces, non_ferrous hardware/accessories/trim and similar items where painting would normally be omitted. | |
| 1.5 ELECTRICAL SYSTEM PERFORMANCE | |
| A. General: The overall system performances of electrical work are of even greater importance than the specified individual unit_of_work performances. Each unit of electrical work has been designed and specified to perform at minimum levels of output and efficiency and is intended to contribute to and be compatible with the entire system. Compatibility of actual performances by electrical system performances is the Contractor's responsibility. | |
| B. Adjustments: Where it has been determined that electrical systems do not or will not perform in compliance with the specified performances, adjustments or corrections shall be made to the work as necessary to achieve required performances. | |
| 1.6 ELECTRICAL WORK CLOSEOUT | |
| A. Additional Service: Perform services within the above 12-month period not classified as routine maintenance or as warranty work as described in Division 1 Section "Warranties and Bonds" when authorized in writing. Compensation for additional services must be agreed upon in writing prior to performing services. | |
| B. Closeout Coordination: Coordinate closeout operations with closeout of mechanical systems and other power consuming equipment. | |
| C. Record Drawings: Maintain a blue_line set of electrical contract drawings and/or shop drawings in clean, undamaged condition, for indication of major electrical equipment or concealed lines located in position other than that shown on the contract drawings. Mark_up whatever drawings are most capable of showing installed conditions accurately. In general, record every substantive installation of electrical work which previously is either not shown or shown inaccurately, specifically record the following: | |
| a. Work concealed behind or within other work, in a nonaccessible location. | |
| b. Main feeders with switchgear, panelboards, and control devices located, identified and numbered. This information shall be displayed in a glazed, hardwood frame, minimum two (2) feet square, near the main service disconnect. | |
| c. Maintenance procedures and schedules. | |
| d. Testing procedures and acceptable parameters. | |
| G. Cleaning and Lubrication: After final testing of each electrical system, clean system both externally and internally. Comply with manufacturer's instructions for lubrication of both power and hand operated equipment. Touch_up minor damage to factory_painted finishes and provide one pint of touch-up paint for each color of major equipment installed. | |

| |
|---|
| 1.10 SUBMITTALS |
| A. LIGHTING |
| 1. Product Data: Submit manufacturer's product data and installation instructions on each type building lighting fixture photocell, contactor and component. |
| 2. Shop Drawings: Submit fixture shop drawings where specifically indicated in booklet form with separate sheet for each fixture, assembled in "luminaire type" alphabetical or numerical order, with proposed fixture and accessories clearly indicated on each sheet. |
| 3. Maintenance Data: Submit maintenance data and parts list for each lighting fixture and accessory; including "trouble_shooting" maintenance guide. Include that data, product data, and shop drawings in a maintenance manual. |
| PART 2 - PRODUCTS |
| 2.1 CABLE AND WIRE |
| A. Provide factory-fabricated wire or cable of the size, rating, material and type as indicated for each service in compliance with NECA - Standard of Installation. Where not indicated, provide proper selection as determined by the work requiring the installation to comply with NEC standards. Conductors shall be rated 600 volt of insulation type THW, THWN, THHN, or USE installed in compliance with National Electrical Code requirements. |
| B. Provide bonding conductors for sizes No. 8 AWG and smaller of solid bare copper per ASTM B 1, and for sizes No. 6 AWG and larger stranded bare copper per ASTM B 8. |
| C. No. 10 AWG and smaller diameter shall be solid copper; No. 8 AWG and larger diameter shall be stranded copper. |
| D. Provide color coding for service, feeder, branch, control, and signaling circuit conductors. Color shall be green for grounding conductors and white for neutrals; except where neutrals of more than one system are installed in same raceway or box, other neutral shall be white with colored (not green) stripe. Color of ungrounded conductors in different voltage systems shall be as follows: |
| a. 120/208 volt, 3-phase: |
| i. Phase A - black. |
| ii. Phase B - red. |
| iii. Phase C - blue. |
| E. Provide the following types of cables in NEC approved locations and applications where indicated. Provide cable UL listed for its intended use. |
| a. Metal clad cable: Type MC. |
| F. Provide UL 486A, factory-fabricated, solderless, metal connectors of the size, ampacity, rating, material, type and class as indicated for each service. Where not indicated, provide proper selection as determined by the work requiring the installation to comply with NEC standards. Provide insulating tape in compliance with UL 510. |
| 2.2 ELECTRICAL RACEWAYS |
| A. Metal Conduit, Tubing and Fittings: Provide metal conduit, tubing and fittings of type, grade, size and weight indicated for each service. Where type and grade are not indicated, provide proper selection as determined by the work requiring the installation to comply with NEC standards for wiring requirements. |
| a. Rigid Steel Conduit: ANSI C80.1, UL 6. |
| b. Intermediate Steel Conduit (Zinc Coated Steel): UL 1242. |
| c. Rigid Metal Conduit Fittings: UL 514B, cadmium- or zinc- coated threaded type. |
| d. Electrical Metal Tubing (EMT): ANSI C80.3, UL 797. |
| e. EMT Fittings: UL 514B, compression or set-screw type |
| f. Flexible Metal Conduit: Cadmium- or zinc-coated steel. |
| g. Flexible Metal Conduit Fittings: UL 514B, cadmium- or zinc-coated. |
| h. Liquid-Tight Flexible Metal Conduit: UL 360, provide liquid-tight flexible metal conduit comprised of single strip, continuous, flexible, interlocked, double-wrapped steel, galvanized inside and outside; forming smooth internal wiring channel; with liquid-tight jacket of flexible polyvinyl chloride. |
| i. Liquid-Tight Flexible Metal Conduit Fittings: FS W-F-406. |
| B. Wireways: Electrical wireways shall be of types, sizes, and number of channels as indicated. Fittings and accessories including but not limited to couplings, offsets, elbows, expansion joints, adapters, hold-down straps, and end caps shall match and mate with wireway as required for complete system. Where features are not indicated, select to fulfill wiring requirements and comply with applicable provisions of NEC. Wireway covers shall be hinged type. |
| C. Surface Metal Raceways and Fittings: UL 5, two-piece steel, totally enclosed. Snap cover type with wiring devices, sizes and channels as indicated. Wiremold, or approved equal. |
| a. Type a: Two section, steel, approximately 7/8 inch x 1 1/4 inch wide, with 20 amp, 125V, specification grade grounding surge protection receptacles 2'-6" on centers, alternating circuits. Provide with ivory paintable finish. |
| 2.3 ELECTRICAL OUTLET BOXES AND FITTINGS |
| A. Interior Outlet Boxes: UL 514A, provide galvanized flat rolled sheet steel interior outlet wiring boxes, flush mounted of type, shapes and sizes, including box depths, to suit each respective location and installation; construct with stamped knockouts in back and sides, and with threaded screw holes with corrosion-resistant screws for securing box covers and wiring devices. Provide feraloy cast outlet boxes where surface mounted with threaded conduit hubs to suit each respective location and installation. |
| B. Weatherproof Outlet Boxes: Provide corrosion-resistant cast metal weatherproof outlet wiring boxes, of types, shapes and sizes, with threaded conduit ends, cast metal face plates with spring-hinged waterproof caps suitably configured for each application, including faceplate gaskets and corrosion-resistant fasteners. Weatherproof while in operation. |
| C. Cast-Iron Floor Boxes: Fully adjustable, waterproof, with threaded raceway entrances, adjusting rings, gaskets, and brass floor plates. Provide multi-section boxes with individual screw type brass section covers, barrier between compartments and provide for a duplex receptacle under one or more of the covers. Telephone outlets shall have provisions to accommodate 10-wire telephone terminal block. Provide gaskets where required to ensure watertight installation. Provide trim suitable for floor conditions. |
| 2.4 WIRING DEVICES |
| A. General: Provide factory-fabricated wiring devices, in types, colors and electrical ratings for applications indicated and complying with NEMA Standards Publication No. WD 1. Where types and grades are not indicated, provide proper selection as determined by installer to fulfill wiring requirements, and comply with NEC and NEMA standards for wiring devices. Provide receptacles with isolated ground and/or surge protection where indicated. |
| B. Receptacles: |
| a. Hospital Grade Duplex: UL 498, provide duplex heavy duty type receptacles, 2-pole, 3-wire grounding, with green hexagonal equipment ground screw, ground terminals and poles internally connected to mounting yoke, 20-amperes, 125 volt, ivory nylon face with metal plaster ears, side wiring, NEMA Configuration 5-20R, unless otherwise indicated. |
| b. Hospital Grade Ground Fault Receptacle: Provide ground fault protected duplex receptacle |
| i. Provide with cast aluminum weatherproof cover where indicated to be WP while in operation. |
| C. Switches: |
| a. Snap: UL 20, provide general duty flush single-pole toggle switches, 20-amperes, 120-277 volts AC only, with mounting yoke insulated from mechanism, equip with plaster ears, ivory switch handle and side wired screw terminals. Single pole, Three-way and Four-way as indicated on drawings. |
| b. Motion Sensing, Ceiling Mounted: Provide dual technology ultrasonic and passive infrared or microphonic and passive infrared motion detector, manual off switch, 0 to 4800 watt fluorescent switching capacity, 277 volts AC, 360 sensing coverage, six to 15 minute off time delay, LED walk test indicator, bypass switch, suitable for use in classrooms, 5_year warranty, UL listed, Universal Energy Control (UNENCO) Switchomatic Coordinate with connected wattage and type of room light fixtures. |

| |
|---|
| D. Wiring Device Accessories: |
| a. Wall Plates: Provide UL listed, one-piece device plates for outlets and fittings to fit the device installed. For flush-mounted outlets on finished walls, provide white switch and outlet plates of types, sizes and with ganging and cutouts as indicated. Install with metal screws for securing plates to devices; screw heads colored to match finish of plate. |
| b. For surface mounted boxes, provide feraloy cast outlet plates on all outlet boxes, type suitable for wiring device installed in box. |
| c. Provide plate with engraved legend where indicated. |
| 2.5 SAFETY AND DISCONNECT SWITCHES |
| A. General: UL 98, NEMA KS1, provide surface-mounted, sheet-steel enclosed switches, of types, sizes and electrical characteristics indicated; 3-blades, 4-wire with amperage rating as required; 60 hertz and visible blades with door in open position. Provide with safety handle which is easily recognizable and is capable of being padlocked in the open position and operating mechanism for quick-make and quick-break. Current carrying parts of high-conductivity copper, with silver-tungsten type switch contacts. Provide NEMA 1 type enclosures indoors and NEMA 3R type enclosures with rainlight hubs outdoors. |
| B. Provide General Duty Type: 240 volts AC, Type GD. Heavy Duty Type: 600 volts AC. |
| C. Switches used as motor disconnect means shall be horsepower rated. Fused switches shall utilize Class R fuseholder and fuses unless indicated otherwise or recommended by equipment manufacturer. |
| 2.6 ELECTRICAL GROUNDING AND BONDING EQUIPMENT |
| A. General: UL 467. Provide grounding products of types indicated and of sizes and ratings as required by NEC. Provide all material required including but not necessarily limited to, cable/wire, connectors, terminals (solderless lugs), grounding rods/electrodes, bonding jumper braid and other items and accessories needed for a complete installation. Where more than one type meets indicated requirements, selection is installer's option. Where materials or components are not otherwise indicated, provide products complying with NEC, and established industry standards. |
| B. Electrical Grounding Conductors: Unless otherwise indicated, provide electrical grounding conductors for grounding connections matching power supply wiring materials except bare or green insulation and sized according to NEC. Equipment grounding conductors shall have green insulation. Solid conductors shall comply with ASTM B-3, stranded conductors with ASTM B-8. |
| C. Grounding Connectors: Provide listed and labeled grounding connectors for the required materials. Provide high-conductivity plated pressure connector units or exothermic welded connections. |
| 2.7 COMBINATION MOTOR CONTROLLERS |
| A. General: Motor circuit protector; molded-case circuit-type breaker type with magnetic-only trip element calibrated to coordinate with the actual locked-rotor current of the connected motor and the controller overload relays. Provide breakers that are factory assembled with the controller, interlocked with unit cover or door, and arranged to disconnect the controller. Provide motor circuit-protectors with field-adjustable trip elements. |
| 2.8 LIGHTING FIXTURES |
| A. Provide lighting fixtures of sizes, types, and ratings indicated in lighting fixture schedule |
| B. Wiring: Provide electrical wiring within fixture suitable for connecting to branch circuit. |
| a. NEC Type AF for 120 volt, minimum No. 18 AWG. |
| b. NEC Type SF_2 for 277 volt, minimum No. 18 AWG. |
| 2.9 TIME CONTROLLED SWITCHES |
| D. Provide electrically operated time controlled maintained contact switches with 24_hour dials capable of periodically and automatically switching mechanically held or electrically held contactors ON and OFF. Select switches which permit selection of from 1 to 7 ON_OFF operations each day; with coil ratings of 120 volts, 60 Hz, and with DPDT switch. Provide flush mount enclosure, NEMA Type 1, with side hinged door and lock, mounting holes and knockouts. Provide timing switch with manual circuit by_pass switch, 10 hour reserve power, and separate grounding terminal. Finish enclosure with manufacturer's standard gray finish. |
| 2.10 MOTION DETECTORS |
| A. Indoor Motion Detectors: Provide passive infrared motion sensor to operate lights on detection of occupancy, 120/277 volts, field adjustable. |
| B. Outdoor Motion Detectors: Passive infrared motion sensor in weatherproof enclosure with adjustable digital sensitivity and time delay and isolated SPDT relay contact. Provide unit suitable for operation at temperatures as low as -40F. Provide adjustable mounting bracket. |



**BALZER
& ASSOCIATES**
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS
Roanoke / Richmond
New River Valley / Staunton
Harrisonburg / Lynchburg
www.balzer.cc



CCC PHASE 2
HISTORIC RENOVATION
ELECTRICAL SPECIFICATIONS
1 COREIN-HARMON DRIVE
PULASKI, VIRGINIA 24001

DRAWN BY DWG
DESIGNED BY DWG
CHECKED BY
DATE 04/22/25
SCALE AS INDICATED
REVISIONS

INSTALLATION
PART 3 - INSTALLATION

3.1 General

- A. Verify final locations for rough_in with field measurements and with the requirements of the actual equipment to be connected.
- B. Rough_in for owner furnished equipment to make equipment operate as intended, including providing miscellaneous wiring items.
- C. Adjust operating mechanisms for free mechanical movement. Clean interior and exterior using manufacturer's approved methods and materials.
- D. Touch-up scratched or marred surfaces to match original finish.
- E. In general, perform cutting and patching as necessary. Exercise care where cutting, channelling, chasing or drilling floors, walls, partitions, ceilings or other surfaces for installation of electrical work.
- F. Patch finished surfaces and building components using new materials specified for the original installation and experienced installers. Installers' qualifications refer to the materials and methods required for the surface and building components being patched.

3.2 CABLE, WIRE AND CONNECTORS

- A. Provide insulated conductors installed in conduit, except where specifically indicated or specified otherwise or required by NEC to be installed otherwise. Provide insulated equipment grounding conductor in feeder and branch circuits, including lighting circuits. Grounding conductor shall be separate from electrical system neutral conductor.
- B. Coordinate cable and wire installation with electrical raceway and equipment installation. Conductor sizes indicated are copper. Pull conductors together where more than one is being installed. Use pulling means and lubricant that will not damage conductor or raceway. Use splice and tap connectors which are compatible with conductor material, and only in accessible junction, pull or outlet boxes.
- C. Tighten electrical connectors and terminals, including screws and bolts, in accordance with manufacturer's published torque tightening values. Where manufacturer's torquing requirements are not indicated, tighten connectors and terminals to comply with tightening torques specified in UL 486A.

3.2 ELECTRICAL RACEWAYS

- A. Provide with complete electrical raceway system before installing conductors within raceways. Provide support as required by NEC but within 1 foot of a change in direction or connection to an enclosure, cover ends of empty conduit to prevent entry of debris during rough-in, provide bonding type locknuts at boxes. Conceal conduit, unless indicated otherwise within finished walls, ceilings and floors. Run exposed conduits parallel or perpendicular to the building structure, close to the ceiling or beams. Keep raceways at least 6 inches away from parallel runs of flues, steam, and hot water pipes.
- B. Use the following wiring methods:
- a. Outdoors:
- i. Intermediate metal conduit
- ii. Rigid metal conduit
- iii. Liquid-tight flexible metal conduit
- b. Indoors:
- i. Electrical metallic tubing
- ii. Flexible metal conduit
- iii. Rigid metal conduit (where exposed and subject to damage)
- C. Use raceway fittings that are of types compatible with the associated raceway and suitable for the use and location. For intermediate steel conduit, use threaded rigid steel conduit fittings except as otherwise indicated.
- D. Run exposed, parallel, or banked raceways together. Make bends in parallel or banked runs from the same center line so that the bends are parallel. Factory elbows may be used in banked runs only where they can be installed parallel. This requires that there be a change in the plane of the run such as from wall to ceiling and that the raceways be of the same size. In other cases provide field bends for parallel raceways.
- E. Install pull wires in empty raceways. Use No. 14 AWG zinc-coated steel or monofilament plastic line having not less than 200-lb. tensile strength. Leave not less than 12 inches of slack at each end of the pull wire.
- F. Flexible Connections: Use short length (maximum of 6 ft.) of flexible conduit for recessed and semirecessed lighting fixtures, for equipment subject to vibration, noise transmission, or movement; and for all motors. Use liquid-tight flexible conduit in wet locations. Install separate ground conductor across flexible connections.
- G. Surface Metal Raceway: Install to walls, cabinets, and ceilings as recommended by equipment manufacturer with fasteners suitable for the material to which the surface metal raceway is being attached. Install a separate green ground conductor in raceway from the junction box supplying the raceway to receptacle or fixture ground terminals. Provide as an integral part or install wiring devices as indicated. Make cuts and other modifications with factory cuts and other modifications with factory furnished tools specifically designed for the purpose.

3.3 ELECTRICAL BOXES AND FITTINGS

- A. Provide weatherproof outlet boxes for interior and exterior locations exposed to moisture, flush mounted boxes for connection to concealed conduit and pull boxes as required for installation of conductors. Sizes shall be adequate to meet NEC volume requirements, but not smaller than sizes indicated. Remove knockouts only as required and plug unused openings.
- B. Fasten boxes rigidly to substrate or structural surfaces to which they are to be mounted, or solidly embed electrical boxes in concrete or masonry.

3.4 WIRING DEVICES

- A. Install wiring devices in clean outlets after wiring has been installed. Do not install plates and cover installed wiring devices until painting is complete.
- B. Ground all wiring devices unless indicated otherwise. Test wiring devices for correct polarity, proper ground and electrical continuity.
- C. Install covers and device plates with edges in continuous contact with finished wall surfaces without use of mats or similar devices. Plaster or caulking used as a filling to repair openings around outlets shall not be applied without removing the cover or device plate. Plates installed in wet areas shall be gasketed.

3.5 SAFETY AND DISCONNECT SWITCHES

- A. Install disconnect switches used for motor-driven equipment within sight of the controller and motor and not more than 50 feet from the controller and motor unless indicated otherwise.
- B. Provide an electrical ground for all disconnect switches.
- C. Test all switches for proper operation by operating them energized, but without load for six opening/closing cycles. Inspect switch and correct deficiencies, then retest to demonstrate compliance.

3.6 ELECTRICAL GROUNDING EQUIPMENT

- A. Install electrical grounding systems where shown, in accordance with applicable portions of National Electrical Code, **NECA 331-2014 "Standard for Building and Service Entrance Grounding and Bonding,"** and in accordance with recognized industry practices to ensure that products comply with requirements and serve intended functions.
- B. Provide separate grounding conductor with wiring in all raceways.
- C. Provide grounding electrode conductor and connect to reinforcing steel in foundation footing where indicated.
- D. Install clamp-on connectors only on thoroughly cleaned metal contact surfaces, to ensure electrical conductivity and circuit integrity.

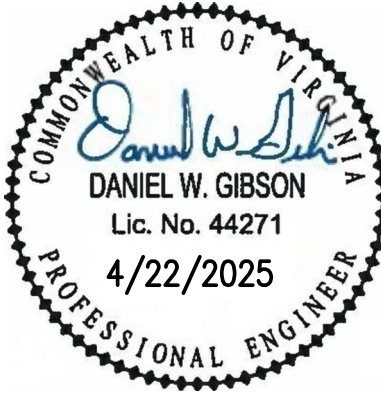
3.7 LIGHTING FIXTURES

- A. General: Install lighting fixtures of types indicated, where shown and at indicated heights, in accordance with lighting fixture manufacturer's written instructions and with recognized industry practices. Comply with NEMA standards and requirements of National Electrical Code pertaining to installation of lighting fixtures and with applicable portions of NECA's "Standards of Installation".
- B. Fasten surfaced fluorescent fixtures to suspended ceiling system near corner of each unit. Bolt fixture to main ceiling supports with stud_clips minimum 1/2_20. Support fixtures weighing in excess of 56 pounds directly from the building structure. Recessed and semi_recessed fixtures may be supported from suspended ceiling support system ceiling tees if the ceiling system support wires are provided at a minimum of four wires per fixture and located not more than 6 inches from each corner of each fixture. In addition, provide support clips securely fastened to ceiling grid members at or near corner of each recessed fixture.
- C. Secure pendant mounted fluorescent fixtures via outlet box directly to building structure with approved bolting and clamps. Provide each stem or hanger with an approved swivel joint to ensure a continued plumb installation.
- D. Mounting heights indicated are to bottom of ceiling_mounted fixtures and to center of wall mounted fixtures.
- E. Install parking lighting units complete with poles/standards and products as indicated, in accordance with manufacturer's written instructions, applicable requirements of NEC, NESC and NEMA standards, and with recognized industry practices to ensure that roadway and parking area lighting equipment fulfill requirements.
- F. Adjust poles as necessary to provide a permanent plumb vertical position with the bracket arm in proper position for luminaire location. After installation, touch up pole finish with paint furnished by pole manufacturer.
- G. Metal Poles: Provide anchor bases with galvanized steel anchor bolts, threaded at the top end and bent 90 degrees at the bottom end. Provide galvanized nuts, washers, and ornamental covers for anchor bolts. Concrete for anchor bases, polyvinyl chloride (PVC) conduit ells, and ground rods shall be as specified. Thoroughly compact backfill with compacting arranged to prevent any pressure between conductor, jacket, or sheath and the end of the conduit ell.
- H. Install all exit lights lighting units plumb, square and level with walls and ceilings and secure in accordance with manufacturer's written instructions. Mounting heights shall be to bottom of unit.
- I. Clean lighting fixtures of dirt and debris upon completion of installation. Protect installed fixtures from damage during remainder of construction period.
- J. Do not install interior fixture lens until construction is complete or protect lens from accumulation of dust and debris.
- K. Adjust all fixtures with adjustable aiming to meet the Architect/Engineer's approval.
- L. Test all lighting fixtures for compliance with intended purpose. Correct malfunctioning or noisy units, then retest to demonstrate compliance.
- M. At date of substantial completion, replace all lamps which are observed to be noticeably dimmed as judged by the Architect/Engineer.
- N. Provide tight equipment grounding connections to comply with tightening torques specified in UL 486A for each lighting fixture.



**BALZER
& ASSOCIATES**
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

Roanoke / Richmond
New River Valley / Staunton
Harrisonburg / Lynchburg
www.balzer.cc



CCC PHASE 2
HISTORIC RENOVATION
ELECTRICAL SPECIFICATIONS

1 CORBIN-HARMON DRIVE
PULASKI, VIRGINIA 24001

DRAWN BY DWG
DESIGNED BY DWG
CHECKED BY
DATE 04/22/25
SCALE AS INDICATED
REVISIONS

E302
PROJECT NO 23220008.00